

~~{Atty Docket No.}~~ 211790US-3

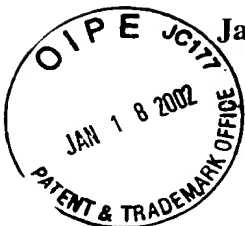
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~~TITLE OF THE INVENTION}~~

**METHOD AND APPARATUS FOR IMAGE FORMING CAPABLE OF [  
]EFFECTIVELY COLLATING A STACK OF SINGLE-/DOUBLE-SIDED[  
]RECORDING SHEETS IN A DESIRED EJECTION TRAY**

#### **[CROSS-REFERENCE TO RELATED APPLICATIONS]**

This application claims priority to Japanese Patent Application Nos.  
2000-231576, filed on July 31, 2000, 2000-231575, filed on July 31, 2000, and  
2001-185475, filed on June 19, 2001, wherein the entire contents of these three  
Japanese Patent Applications are hereby incorporated by reference herein.]



#### **BACKGROUND OF THE INVENTION**

~~{FIELD OF THE INVENTION}~~ **[Field of the Invention]**

The present invention **[generally]** relates to a method and apparatus for image forming~~{,}~~ and more particularly[, ] to a method and apparatus for image forming[, **which is**] capable of effectively collating a stack of single-sided or double-sided recording sheets in increasing order of ~~{pages}~~ **[page numbers]** in a desired ejection tray.

~~{DISCUSSION OF THE BACKGROUND}~~ **[Discussion of Background]**

~~{Some background}~~ **[Some conventional]** image forming apparatuses ~~{including}~~[, **such as**] copying machines, printers, ~~{facsimile machines, etc.}~~ **[facsimiles, and other similar devices,]** are capable of performing a double-~~{side}~~ **[sided]** recording operation for recording on both **[the first and second]** sides of a

recording sheet. Typically, in the double-~~{side}~~ **[sided]** recording operation of these **[conventional]** machines, a first toner image is formed on ~~{one}~~ **[the first]** side of a recording sheet and a second toner image is formed on the ~~{other}~~ **[second]** side of the same recording sheet after the first toner image is fixed. Before the second toner image is formed, the recording sheet is reversed. After ~~{a}~~ completion of the second image forming **[operation]**, the second toner image is fixed and, as a result, a double-sided recording is achieved.

~~{The}~~ **[Various problems may occur with the]** above-described double-~~{side}~~ **[sided]** recording ~~{method involves various problems}~~ **[operation,]** such as difficulty in reversing ~~{a}~~ **[the]** recording sheet, unstable sheet transfer due to a paper curl problem caused by the first fixing process, ~~{etc}~~ **[and other similar problems]**.

On the other hand, ~~{published Japanese unexamined patent applications, No. JPAP1-209470 and No. JPAP10-142869, describe}~~ **[each of Japanese Unexamined Patent Application Publication Nos. 1-209470 (hereinafter "JP '470") and 10-142869 (hereinafter "JP '869") describes]** an image forming apparatus ~~{that}~~ **[which]** transfers toner images to both **[the first and second]** sides of a recording sheet with two image carrying members and fixes the toner images ~~{through}~~ **[via an]** one time fixing process.

In the image forming apparatus of ~~{the published Japanese unexamined patent application, No. JAPA1-209470}~~ **[JP '470]**, a first toner image **[is]** formed on a photoconductive member **[and]** is transferred onto a transfer belt with a first transfer member. Then, a second toner image is formed on the photoconductive member and is transferred onto ~~{one}~~ **[a first]** surface of a recording sheet with the first transfer

member. After that, the first toner image on the transfer belt is transferred onto the ~~{other}~~ **[second]** side of the recording sheet with a second transfer ~~{ember}~~ **[member]**. Thereby, the first and second toner images are transferred onto both **[the first and second]** sides of the recording sheet ~~{which}~~ **[and the recording sheet]** is then subjected to a fixing process.

~~{A published Japanese unexamined patent application, No. JPAP3-253881,}~~  
**[Japanese Unexamined Patent Application Publication No. 3-253881 (hereinafter “JP ‘881”)]** describes an image forming apparatus which is similar to ~~{that of the above-mentioned application, No. JPAP1-209470. A difference is that the above-mentioned application, No. 3-253881,}~~ **[the image forming apparatus of JP ‘470. A difference between the two image forming apparatuses is that the image forming apparatus of JP ‘881]** eliminates the second transfer member by reversing a polarity of the second toner image on the photoconductive member before it is transferred to the recording sheet. Thereby, the first and second ~~{tone}~~ **[toner]** images are transferred onto both ~~{sides}~~ **[the first and second sides, respectively,]** of the recording sheet without the second transfer member.

The image forming apparatus of ~~{the published Japanese unexamined patent application, No. JAPA10-142869,}~~ **[JP ‘869]** is provided with two transfer members and performs **[an]** one time fixing operation for fixing color images which have been transferred onto both **[the first and second]** sides of a recording sheet with the ~~{two}~~ **[first and second]** transfer members~~[, respectively]~~. This image forming apparatus uses a guide member ~~{including}~~ **[, which includes]** a flat plate on which a plurality of star-like wheels are rotatably mounted~~[,]~~ to smoothly transfer the ~~{recording sheet}~~.

double-sided [recording sheet] with the color images [on both the first and second sides thereof].

However, the

~~However, these~~ image forming apparatuses[, of JP '470, JP '869, and JP '881,] have a drawback ~~{in a}~~ [with respect to the] stack order of the output recording sheets. For example, as shown in ~~{Fig}~~ [FIG]. 1, a stack of recording sheets are output face down in a tray T1[,] but are face up in a tray T2. Therefore, the stack of recording sheets output to the trays T1 and T2 are different in ~~{a page order.}~~ [page number order.]

~~{A published Japanese unexamined patent application, No. JPAP2000-19799, described}~~ [Japanese Unexamined Patent Application Publication No. 2000-19799 (hereinafter "JP '799") describes] an image forming apparatus that includes a tray switching mechanism for switching between face-down and face-up ejection trays. ~~{This application describes a use of a}~~ [A] sheet reverse mechanism ~~{that makes}~~ [is used to make] it possible to switch the ejection trays without changing relationships between images and surfaces of a recording sheet. ~~{This application also describes a}~~ [A] technique [is also used] in which the relationships between images and surfaces of a recording sheet are changed when the ejection trays are switched from one to the other in an image forming apparatus having no sheet reverse mechanism.

However, ~~{the above-described application, No. JPAP2000-19799,}~~ [JP '799] has a drawback in that a thick sheet is not properly transferred. This is because a recording sheet is bent when it is reversed by the sheet reverse mechanism.

In a case ~~{that}~~ [where] an image forming apparatus[,] having a plurality of ejection trays~~{,}~~ as shown in ~~{Fig}~~ [FIG.] 1, ~~{is applied with}~~ [applies] the technique



for changing the relationships between images and surfaces of a recording sheet~~{,}~~ as described in ~~{the above-mentioned application, No. JPAP2000-19799}~~ [JP '799], it is not easy for a user to properly instruct the change of the relationships between images and ~~{surface}~~ [surfaces] of a recording sheet.

~~{Another published Japanese unexamined patent application, No. JPAP2000-38234, described}~~ [Japanese Unexamined Patent Application Publication No. 2000-38234 (hereinafter "JP '234") describes] an image forming apparatus which reads images on both [the first and second] sides of a double-sided original and records the read images on both ~~{sides}~~ [the first and second sides, respectively,] of a recording sheet. In this apparatus, the double-sided original is reversed after a completion of reading ~~{one}~~ [the first] side of the original and [then,] the ~~{other}~~ [second] side of the original is read. In the recording [operation], the recording sheet is reversed after ~~{a completion of }~~ [the] recording ~~{an}~~ [of a first] image on ~~{one}~~ [a first] side of the recording sheet ~~{and another}~~ [is completed and then, a second] image is recorded on the ~~{other}~~ [second] side of the recording sheet.

~~{Another published Japanese unexamined patent application, No. JPAP11-258864,}~~ [Japanese Unexamined Patent Application Publication No. 11-258864 ]describes an image forming apparatus which reads images on both [the first and second] sides of a double-sided original by moving the original and ~~{records}~~ [then recording] the read images on both [the first and second] sides of a recording sheet ~~{through}~~ [via a] one time sheet transferring process.

However, ~~{these}~~ [the] apparatuses [which are] capable of double-~~{side}~~ [sided] reading and double-~~{side}~~ [sided] recording [have the drawback that they] do

not collate a stack of recording sheets, particularly when a plurality of ejection trays are used, ~~{in addition to common problems of low stability in sheet transfer and of a larger machine size.}~~ **[and this drawback is in addition to the problems they have in common with conventional apparatuses (i.e., low sheet transfer stability and larger machine size).]**

### SUMMARY OF THE INVENTION

The present invention provides a novel image forming apparatus~~{In one example, a novel}~~ **[which avoids the drawbacks of the prior art. A first example of an]** image forming apparatus includes ~~{a first image carrying member, a}~~ **[first and]** second image carrying ~~{member}~~ **[members]**, a plurality of ejection trays, and a sheet transferring mechanism. The first image carrying member carries images in increasing order of corresponding sheet numbers. The second image carrying member carries an image transferred from the first image carrying member. The plurality of ejection trays includes a first ejection tray configured to stack a plurality of output sheets in a ~~{straight}~~ **[forward]** orientation and a second ejection tray configured to stack a plurality of output sheets in a reversed orientation. The sheet transferring mechanism transfers a recording sheet to a nip formed between the first and second image carrying members. In ~~{this}~~ **[the]** image forming apparatus **[of the first example]**, the first image carrying member ~~{is caused to transfer}~~ **[transfers]** an image to ~~{one}~~ **[a first]** surface of the recording sheet and, at the same time, the second image carrying member ~~{is caused to transfer another}~~ **[transfers a second]** image to ~~{another}~~ **[a second]** surface of the recording sheet in response to a selection between the first and second

ejection trays in a double-~~{side}~~ **[sided]** recording mode so that the first and second ejection trays stack the plurality of recording sheets in increasing **[page number]** order ~~{of pages}~~.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a mode selecting mechanism configured to select **[any]** one of a single-~~{side}~~ **[sided]** recording mode and ~~{the}~~ **[a]** double-~~{side}~~ **[sided]** recording mode.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a tray selecting mechanism configured to select **[any]** one of the first and second ejection trays.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a sheet selecting mechanism configured to select ~~{a}~~ **[the]** type of sheet **[to be used]**. In this case, **[any]** one of the first and second ejection trays is selected in accordance with a selection made by the sheet selecting mechanism.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a plurality of sheet supplying ~~{mechanism}~~ **[mechanisms]** each configured to supply the recording sheets to the sheet transferring mechanism.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a cassette selecting mechanism configured to select one of the plurality of sheet supplying ~~{mechanism}~~ **[mechanisms]**.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a sheet selecting mechanism configured to select ~~{a}~~ **[the]** type of sheet **[to be used]**. In this case, one of the plurality of sheet supplying ~~{mechanism}~~

[mechanisms] is selected in accordance with a selection made by the sheet selecting mechanism.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include an extra sheet supplying mechanism configured to insert a recording sheet in an approximately ~~{straight}~~ **[forward]** orientation. In this case, a recording sheet is transferred from the extra sheet supplying mechanism to the first ejection tray via the sheet transferring mechanism.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a sheet selecting mechanism configured to select ~~{a}~~ **[the]** type of sheet **[to be used]**. In this case, the extra sheet supplying mechanism and the first ejection tray are selected when the sheet selecting mechanism selects a thick sheet. ~~{~~  
~~}~~The extra sheet supplying mechanism may include a manual sheet insertion tray.

The ~~{above-mentioned}~~ image forming apparatus **[of the first example]** may further include a sensor for detecting ~~{an event in that}~~ **[when]** the manual sheet insertion tray is accessed by a user. In this case, the extra sheet supplying mechanism and the first ejection tray are selected when the sensor detects ~~{the event.}~~ **[that the user accesses the manual sheet insertion tray.]**

The first image carrying member may ~~{be caused to}~~ transfer an image ~~{of odd page to}~~ **[on odd-numbered pages onto]** an upper surface of the recording sheet and, at the same time, the second ejection tray ~~{is caused to transfer an image of even page on}~~ **[transfers an image on even-numbered pages onto]** a lower surface of the recording sheet when the second ejection tray is selected in a double-~~{side}~~ **[sided]** recording

mode so that the second ejection tray stacks a plurality of the recording sheets in increasing order of ~~{pages}~~ **[page numbers]**.

The first image carrying member may ~~{be caused to}~~ transfer ~~{an}~~ **[a first]** image ~~{to on one}~~ **[onto a first]** surface of the recording sheet and the second image carrying member ~~{is caused to}~~ **[may]** transfer ~~{another}~~ **[a second]** image ~~{on another}~~ **[onto a second]** surface of the recording sheet in response to a selection made by the tray selecting mechanism between the first and second ejection trays.

The mode selecting mechanism, the tray selecting mechanism, the sheet selecting mechanism, and the cassette selecting mechanism may be mounted on a control panel of the apparatus.

In the ~~{above-mentioned}~~ image forming apparatus **[of the first example]**, selections of a single-~~{side}~~ **[sided]** recording mode and the double-~~{side}~~ **[sided]** recording mode, the first and second ejection trays, and ~~{a}~~ **[the]** type of sheet **[to be used]** may be made from an external host system.

In the ~~{above-mentioned}~~ image forming apparatus **[of the first example]**, a selection of the plurality of sheet supplying mechanisms may be made from an external host system.

The first image carrying member may have a property of photoconductivity and ~~{carries}~~ **[may carry]** a toner image made in accordance with an electrophotographic method ~~{and the}~~ **[. The]** second image carrying member ~~{carries}~~ **[may carry]** a toner image transferred from the first image carrying member.

The present invention further provides ~~{another novel}~~ **[a second example of an]** image forming apparatus~~{. In one example, a novel image forming apparatus}~~

[which] includes an image reading mechanism, an image forming mechanism, a plurality of ejection trays, a plurality of sheet cassettes, and a sheet transferring mechanism. The image reading mechanism is configured to read an original. The image forming mechanism is configured to perform an image recording operation including image forming, image carrying, and image transferring processes. The sheet transferring mechanism is configured to transfer a recording sheet from one of the plurality of sheet cassettes to a nip formed between the first and second image carrying members. In ~~{this}~~ [the] image forming apparatus [of the second example], the image forming mechanism performs an image recording operation in response to a selection ~~{between}~~ [of one of] the plurality of ejection trays in accordance with images from originals read by the image reading mechanism either in ~~{a}~~ single-~~{side}~~ [sided] or double-~~{side}~~ [sided] recording ~~{mode}~~ [modes] so that the plurality of ejection trays stack a stack of recording sheets in increasing order of ~~{pages}~~ [page numbers].

The image forming mechanism may form a toner image in accordance with an electrophotographic method. In this case, the image forming mechanism includes first and second image carrying members. The first image carrying member is configured to form a toner image and to carry it thereon in increasing order of ~~{pages}~~ [page numbers] starting from a first page. The second image carrying member is configured to carry the toner image transferred from the first image carrying member. The first image carrying member transfers the toner image to ~~{one}~~ [a first] side of a recording sheet and the second image carrying member transfers the toner image to ~~{the other}~~ [a second] side of the recording sheet.

The plurality of ejection trays may include a first ejection tray configured to stack a plurality of output sheets in a ~~{straight}~~ **[forward]** orientation and a second ejection tray configured to stack a plurality of output sheets in a reversed orientation.

The stack of recording sheets[,], stacked in increasing order of ~~{pages}~~ **[page numbers,]** may be a stack of recording sheets recorded in the single-~~{side}~~ **[sided]** recording mode or in the double-~~{side}~~ **[sided]** recording mode.

The image reading mechanism may read an image on a side of a single-sided original in a single-~~{side}~~ **[sided]** reading mode and images on both **[the first and second]** sides of a double-sided original in a double-~~{side}~~ **[sided]** reading mode.

The image forming mechanism may record images[,], in the single-~~{side}~~ **[sided]** recording mode[,], and outputs[,], in increasing order of ~~{pages}~~ **[page numbers,]** when the images are read in the double-~~{side}~~ **[sided]** reading mode by the reading mechanism.

The image forming mechanism may record images[,], in the double-~~{side}~~ **[sided]** recording mode[,], and outputs[,], in increasing order of ~~{pages}~~ **[page numbers,]** when the images are read in the double-~~{side}~~ **[sided]** reading mode by the reading mechanism.

The image reading mechanism may read images on both **[the first and second]** sides of a double-sided original ~~{through}~~ **[via a]** one time sheet transferring process by moving the double-~~{side}~~ **[sided]** original.

The image reading mechanism may include a first image reading unit[,], configured to read an image of an original by moving the original[,], and a second image

reading unit[, ] configured to read an image of an original by holding the original at a predetermined position.

The second image reading unit may include a moving member that moves under a contact glass and is used as a part of the first image reading unit ~~{under a}~~ **[on the]** condition ~~{in}~~ that the moving member is stopped.

The second image reading unit may be usable when originals are placed on a sheet tray of the first image reading unit.

The image reading mechanism may include a sheet reversing mechanism and ~~{reads}~~ **[may read]** images on both **[the first and second]** sides of an original.

The image reading mechanism may include a detector for detecting **[when]** an ~~{event that an}~~ image ~~{on-reading}~~ **[being read]** is ~~{of}~~ white **[in color]** and cancels reading the image when the image is detected as a ~~{page of}~~ **[blank]** white **[page]**.

In the ~~{above-mentioned}~~ image forming apparatus **[of the second example]**, one of the plurality of ejection trays may be formed in a space between the image reading mechanism and the image forming mechanism.

The image reading mechanism may include a tray for ejecting originals. In this case, the tray has a size within a projection area of the apparatus.

In the ~~{above-mentioned}~~ image forming apparatus **[of the second example]**, a recording sheet may be transferred in an approximately straight line from ~~{one}~~ **[a first sheet cassette]** of the plurality of sheet cassettes to ~~{one}~~ **[a first ejection tray]** of the plurality of ejection trays[, **wherein the first sheet cassette]** ~~{-~~

~~The above-mentioned one}~~ of the plurality of sheet cassettes may be a manual sheet inserting tray.



The ~~{above-mentioned}~~ image forming apparatus **[of the second example]** may further include a control panel close to the image reading mechanism. The ~~{above-mentioned}~~ control panel includes a selecting mechanism configured to select ~~{one of the}~~ **[either a]** single-~~{side}~~ **[sided]** recording ~~{and the}~~ **[mode or a]** double-~~{side}~~ **[sided]** recording **[mode]** and a selecting mechanism configured to select one of the plurality of ejection trays.

The image forming mechanism may form images in increasing order of corresponding sheet numbers.

The image forming mechanism may form a plurality of images in increasing order of ~~{pages}~~ **[page numbers]** when the image reading mechanism reads the plurality of images in increasing order of ~~{pages}~~ **[page numbers]**.

The first image carrying member may have a property of photoconductivity and the second image carrying member may be a belt-shaped intermediate transfer member having a surface resistance in a range of from  $10^5$  [ $\Omega$ ] to  $10^{12}$  [ $\Omega$ ].

The ~~{above-mentioned}~~ image forming apparatus **[of the second example]** may further include a fixing mechanism configured to fix images attached on both **[the first and second]** sides of a recording sheet[,], while the recording sheet is supported by the belt-shaped intermediate transfer member.

The belt-shaped intermediate transfer member may be **[made]** of **[a]** heat ~~{resistance}~~ **[resistant material]**.

The image forming mechanism may perform the image recording operation in accordance with image information sent from an external host system. ~~{One of the}~~ **[Either a]** single-~~{side}~~ **[sided]** recording mode ~~{and the}~~ **[or a]** double-~~{side}~~ **[sided]**

recording mode may be selected by the external host system. One of the plurality of ejection trays may be selected by the external host system.

The ~~{above-mentioned}~~ image forming apparatus **[of the second example]** may further include an external ejection tray unit that includes a connecting sheet path connected to a sheet path of the apparatus for turning and ejecting a recording sheet sent from the image forming mechanism into ~~{one}~~ **[a first ejection tray]** of the plurality of ejection trays. In this case, the external ejection tray unit stacks a plurality of recording sheet in increasing order of ~~{pages}~~ **[page numbers]**. {

}The connecting sheet path may be arranged along an edge portion of the ~~{one}~~ **[first ejection tray]** of the plurality of ejection trays.

The ~~{above-mentioned}~~ image forming apparatus **[of the second example]** may further include a switching pawl configured to selectively switch between ~~{ways for}~~ **[sending]** a recording sheet to the ~~{one}~~ **[first ejection tray]** of the plurality of ejection trays and **[sending a recording sheet to]** the external ejection tray unit.

The ~~{above-mentioned}~~ image forming apparatus **[of the second example]** may further include another external ejection tray unit ~~{that}~~ **[which]** includes a connecting sheet path connected to a sheet path of the apparatus for ejecting a recording sheet sent from the image forming mechanism in an approximately straight manner into one of the plurality of ejection trays. In this case, the external ejection tray unit stacks a plurality of recording ~~{sheet}~~ **[sheets]** in increasing order of ~~{pages}~~ **[page numbers]**.

The present invention provides a ~~{novel}~~ method for image forming. In ~~{one}~~ **[a first]** example, ~~{a novel}~~ **[an image forming]** method includes the steps of ~~{selecting, choosing, inputting, performing, repeating, executing, and repeating. The~~

~~selecting step selects one of a single-side recording and a double-side recording. The~~  
~~choosing step chooses one of a face-down stack and a face-up stack. The inputting step~~  
 inputs[: **selecting either a single-sided or a double-sided recording mode;**  
**choosing the stack to be either face-down or face-up; inputting** ]a plurality of  
 images in increasing order of {pages. The} [page numbers;] performing {step  
 performs} a double-{side} [sided] recording operation[, ] when the double-side  
 recording {is selected. The performing step includes the steps of forming, transferring,  
 fixing, and stacking. The forming step forms two} [mode is selected, by forming first  
 and second] successive images in increasing order of corresponding sheet numbers{  
 The}{,} transferring {step transfers the two} [the first and second] successive images  
 onto both [the first and second] surfaces of a recording sheet{. The}{,} fixing {step  
 fixes the two} [the first and second] successive images attached on {the both}{[both  
 the first and second] surfaces[, respectively,] of the recording sheet{. The}{[, and]  
 stacking {step stacks} the recording sheet in an orientation in accordance with a choice  
 chosen by the choosing step{. The}{;} repeating {step repeats} the performing step until  
 the images input by the inputting step are recorded{. The executing step executes a  
 single-side recording operation when the single-side recording is selected. The  
 executing step includes the steps of forming, transferring, fixing, and stacking. The  
 forming step forms an}{; **executing a single-sided recording operation, when the**  
**single-sided recording mode is selected, by forming** ]images in increasing order of  
 corresponding sheet numbers{. The}{,} transferring {step transfers} the image onto  
 {one} [a first] surface of a recording sheet{. The}{,} fixing {step fixes} the image  
 attached {on} [onto] the {on} [first] surface of the recording sheet{. The}{[, and]

stacking ~~{step stacks}~~ the recording sheet in an orientation in accordance with a choice chosen by the choosing step~~{The}~~**[; and]** repeating ~~{step repeats}~~ the executing step until the images input by the inputting step are recorded.

The inputting step may read a plurality of originals and ~~{generates}~~ **[generate]** data of a plurality of images.

### BRIEF DESCRIPTION OF THE DRAWING

A more complete appreciation of the present ~~{application}~~ **[invention]** and many of the attendant advantages thereof will be readily obtained as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings, wherein:

~~{Fig}~~ **[FIG]. 1** is a cross-sectional view of a ~~{background}~~ **[conventional]** image forming apparatus;

~~{Fig}~~ **[FIG]. 2** is a cross-sectional view of a printer according to an embodiment of the present invention;

~~{Fig. 3 is an illustration for explaining}~~ **[FIG. 3 is a top plan view of]** a control panel of the printer of ~~{Fig}~~ **[FIG]. 2**;

~~{Fig}~~ **[FIG]. 4** is a cross-sectional view of a color printer according to the embodiment of the present invention;

~~{Fig}~~ **[FIG]. 5** is a cross-sectional view of an image forming apparatus, including the printer of ~~{Fig}~~ **[FIG]. 2**, a scanner, and an automatic document feeder ~~{(ADF)}~~ **[or ADF]**;

~~{Fig}~~ **[FIG]**. 6 is a perspective view of the image forming apparatus of ~~{Fig}~~ **[FIG]**. 5;

~~{Fig}~~ **[FIG]**. 7 is a cross-sectional view of an image sensor included in the **[automatic document feeder or]** ADF of ~~{Fig}~~ **[FIG]**. 5;

~~{Fig}~~ **[FIG]**. 8 is a cross-sectional view of an image forming apparatus of ~~{Fig}~~ **[FIG]**. 5 without the ~~{ADE;}~~ **[Automatic document feeder or ADF;]**

~~{Fig}~~ **[FIG]**. 9 is a table for explaining relationships between various manners of image reading and various manners of image forming performed by the image forming apparatuses of ~~{Figs}~~ **[FIGS]**. 5 and 8;

~~{Fig}~~ **[FIG]**. 10 is a cross-sectional view of the image forming apparatus of ~~{Fig}~~ **[FIG]**. 5 with extra ejection trays;

~~{Fig}~~ **[FIG]**. 11 is a cross-sectional view of an image forming apparatus including a modified printer, a modified scanner, and a modified automatic document feeder ~~{(ADE)}~~ **[or ADF]** according to another embodiment of the present invention; and

~~{Fig}~~ **[FIG]**. 12 is a cross-sectional view of a color image forming apparatus including the color printer of ~~{Fig}~~ **[FIG]**. 4, the scanner of ~~{Fig}~~ **[FIG.]** 5[,] and the **[Automatic document feeder or]** ADF of ~~{Fig.5}~~ **[FIG.5]**.

## DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

In describing preferred embodiments illustrated in the drawings, specific terminology is employed for the sake of clarity. However, the **[present]** invention is not intended to be limited to the specific terminology so selected and it is to be

understood that each specific element includes all technical equivalents which operate in a similar manner.

Referring now to the ~~{drawings}~~ **[drawing]**, wherein like reference numeral designate identical or corresponding parts throughout the several views, ~~{particularly to Fig. 2,}~~ **[FIG. 2 illustrates]** a printer 100 according to an embodiment of the present invention ~~{is described. As}~~. **Like the printer** shown in ~~{Fig}~~ **[FIG]. 1**, the printer 100 ~~{is provided at its approximate center with}~~ **[shown in FIG. 2 has]** a photoconductive drum 1 ~~{serving}~~ **[at its approximate center, wherein the photoconductive drum 1 serves]** as a first image carrying member. ~~{Around the photoconductive drum 1, the}~~ **[The]** printer 100 is further provided with various components ~~{including }~~, **which are located around the photoconductive drum 1, including:** a cleaning unit 2~~{, a cleaning unit 2,}~~**;** a discharging unit 3~~{,}~~**;** a charging unit 4~~{,}~~**;** and a development unit 5. ~~{Above, the photoconductive drum 1, an}~~ **[An]** exposure unit 7 is provided ~~{which}~~ **[at a position above the photoconductive drum 1. The exposure unit 7]** emits a laser beam L in a **[predetermined]** direction **[so as to be]** between the charging unit 4 and the development unit 5 **[in order]** to impinge on the surface of the photoconductive drum 1 at a writing position.

~~{In the printer 100, the}~~ **[The]** photoconductive drum 1, the cleaning unit 2, the discharging unit 3, the charging unit 4, and the development unit 5 are assembled into a single unit (hereinafter referred to as a process cartridge) ~~{which}~~ **[within the printer 100. The process cartridge]** can be exchanged at ~~{a time when it consumes its~~

~~lifetime, for example,}~~ [any time when its contents are consumed and its useful life is over.]

The printer 100 is further provided with a belt unit 20 **[located at a position]** under the photoconductive drum 1. The belt unit 20 includes an intermediate transfer belt 10, serving as a second image carrying member, ~~{to}~~ which **[contacts]** the photoconductive drum 1 ~~{contacts}~~. The intermediate transfer belt 10 ~~{is extended}~~ **[extends,]** under pressure[, ] between rollers 11, 12, and 13 and ~~{is rotated}~~ **[the intermediate transfer belt 10 rotates in a]** counterclockwise **[direction]**. The intermediate transfer belt 10 has ~~{a property of electric}~~ **[electrical]** resistance ~~{by which}~~ **[properties so that]** toner can be transferred~~{, and also has a property of}~~ **[thereto. The intermediate transfer belt 10 also has]** heat resistance **[properties]**. In this example, the intermediate transfer belt 10 has a surface resistance in a range of from ~~{ $10^5 \Omega$  to  $10^{12} \Omega$ }~~ **[approximately  $10^5 \Omega$  to approximately  $10^{12} \Omega$ .]**

~~{The intermediate transfer belt 10 is provided inside with rollers 14 and 15 for supporting}~~ **[Rollers 14 and 15, cooling rollers 16, lower fixing roller 18, and first transfer mechanism 21 are provided inside of]** the intermediate transfer belt 10~~{, cooling rollers 16 for cooling it, a lower fixing roller 18, and a first transfer mechanism 21}~~**[. Rollers 14 and 15 help support the intermediate transfer belt 10, while cooling rollers 16 cool the intermediate transfer belt 10].** The lower fixing roller 18 includes a heat source[, ] such as a heater ~~{and fixes}~~ **[, for fixing]** a toner image~~{, transferred}~~ onto a first surface of a recording sheet, ~~{on the same}~~ **[after the toner image has been transferred onto the]** first surface of the recording sheet. The first transfer mechanism 21 is arranged at a position opposite ~~{to}~~ **[of]** the photoconductive

drum 1[, ] relative to the intermediate transfer belt 10[, ] so as to transfer a toner image[, ] formed on the photoconductive drum 1[, ] onto the intermediate transfer belt 10 or a first surface of a recording sheet.

A second transfer mechanism 22, a fixing unit 30, and a belt cleaning unit 25 are arranged **[at various positions]** around the intermediate transfer belt 10. The fixing unit 30 includes an upper fixing roller 19 having ~~{inside}~~ a heat source[, ] such as a heater ~~{and}~~ **[, inside thereof. The upper fixing roller 19]** fixes a toner image~~{, transferred onto a second surface of a recording sheet, to the same}~~ **[onto the ]**second surface of the recording sheet **[, after the toner image has been first transferred onto the second surface of a recording sheet]**. The fixing unit 30 is held ~~{such}~~ **[so]** as to be ~~{moved}~~ **[movable]** about a fulcrum 30a. Thus, the fixing unit 30 can be tilted back and forth in directions **[shown by double-sided arrow]** G with a mechanism (not shown) so as to contact ~~{under pressure and move away from}~~ the lower fixing roller 18 **[, under pressure, and then move away from the lower fixing roller 18]**. Ventilation inside **[of]** the printer 100 is performed by fan F1 which is provided at a position **[to a]** left **[of]** and above the fixing unit 30.

The belt cleaning unit 25 is provided ~~{inside}~~ with a cleaning roller 25a, a cleaning blade 25b, a toner transfer mechanism 25c, and a pivot shaft 25d **[located inside thereof]** so as to clean residual toner off the surface of the intermediate transfer belt 10. The residual toner accumulated in the belt cleaning unit 25 is transferred with the toner transfer mechanism 25c to a toner collection container (not shown). The belt cleaning unit 25 is tilted about the pivot shaft 25d back and forth in directions **[shown**



by double-sided arrow] H with a mechanism (not shown) so as to contact and move away from the intermediate transfer belt 10.

A sheet cassette 26 ~~{that}~~[, which] contains a plurality of recording sheets P[, is provided at a lower part of the printer 100 {and}]. The sheet cassette 26] is configured [so as] to be ~~{pulled}~~ [insertable and removable] from the printer 100 ~~{in a right direction in Fig. 2. A sheet feed}~~]. As shown in FIG. 2, the sheet cassette 26 is inserted by being pushed to the right and removed by being pulled to the left. A sheet feeding] roller 27 is provided at a position close to and above the leading edge of the sheet cassette 26 in a sheet transfer direction, i.e., ~~{a}~~ [towards the] right ~~{direction}~~ in ~~{Fig}~~ [FIG]. 2. A pair of registration rollers 28 are arranged at a position [to the] right ~~{to}~~ [of] the photoconductive drum 1 and a guide member 29 is provided to guide a recording sheet [P] to a transfer position from the registration rollers 28. Above the sheet cassette 26, an electric unit E1 and a control unit E2 are arranged. A manual sheet inlet 35 ~~{that}~~[, which] includes a plate 37 on which a plurality of recording sheets P ~~{are}~~ [may be] placed[, is provided {to} [on] a right[-hand] side of the printer 100 and a sheet ~~{feed}~~ [feeding] roller 36 is arranged at a position such as to feed a recording sheet [P] placed on the plate 37. A recording sheet [P,] inserted from the manual sheet inlet 35[, is guided to the registration rollers 28 by the guide member 29.

A switching pawl 42 is provided at a position [to the] left ~~{to}~~ [of] the fixing unit 30. The switching pawl 42 is turned about a pivot 43 with an actuator (not shown), ~~{i.e.,}~~ [such as] a solenoid, to switch a transfer direction of the recording sheet P sent from the belt unit 20 to a stacking portion 40 formed on the upper surface of the printer

100 or to an ejection tray 44 provided ~~{to}~~ **[at]** a left~~[-hand]~~ side of the printer 100.

The recording sheet **[P]** is sent to the stacker 40 when the switching pawl 42 is set at a position, as shown in ~~{Fig}~~ **[FIG]. 2**, and is sent to the ejection tray 44 when the switching pawl 42 is turned in ~~{a}~~ **[the]** direction **[of arrow] J**.

A pair of transfer rollers 33[,] for transferring the recording sheet **P**[,] are provided above the switching pawl 42 and a pair of ejection rollers 34[,] for ejecting the recording sheet **P** to the stacker 40[,] are provided above the transfer rollers 33. Guide members 31a and 31b are arranged between the transfer rollers 33 and the ejection rollers 34. A pair of ejection rollers 32[,] for ejecting the recording sheet **P** to the ejection tray 44[,] are arranged at a position **[to the]** left ~~{to}~~ **[of]** the switching pawl 42.

The printer 100 of ~~{Fig. 2}~~ **[FIG. 2, which is]** structured in the above-described way[,] performs an image forming operation in which images are recorded on both **[the first and second]** surfaces of a recording sheet **[P]**, in the following manner. In this discussion, an image to be ~~{first}~~ formed **[first]** is referred to as a first image and an image to be ~~{next}~~ formed **[second]** is referred to as a second image. Further, a surface of the recording sheet **P**[,] on which a first image is printed[,] is referred to as a first surface of the recording sheet **P** and the ~~{other}~~ **[second]** surface[,] on which a second image is printed[,] is referred to as a second surface of the recording sheet **P**.

The printer 100 receives signals from an external host system (not shown), ~~{i.e.,}~~ **[such as]** a computer, and forms images with the exposure unit 7 in accordance with the signals. Light[,] from a laser light source of the exposure unit 7[,] is continuously reflected by a motor-driven rotary polygonal mirror 7a and, via mirrors 7b

and an f-~~(f/E)~~[θ] lens, impinges on the charged surface of the photoconductive drum 1. Thereby, an electrostatic latent image is formed on the photoconductive drum 1 in accordance with the received signals.

The above electrostatic latent image is developed with toner by the development unit 5 into a visual toner image and is held on the photoconductive drum 1. For the **[sake of]** convenience ~~(sake)~~, this toner image is referred to as the first toner image. The first toner image is then transferred by an action of the first transfer mechanism 21 onto the intermediate transfer belt 10 which is rotated in synchronism with the photoconductive drum 1. After the transfer process, the toner[,] remaining on the surface of the photoconductive drum 1[,] is removed by the cleaning unit 2 and the charge thereon is discharged by the discharging unit 3. The photoconductive drum 1 is thus prepared for a next job cycle of image forming.

The intermediate transfer belt 10 is rotated counterclockwise, as shown in ~~{Fig}~~ **[FIG]**. 2, while carrying the first toner image which is to be transferred onto a first surface of the recording sheet P. During this process, the second transfer mechanism 22, the fixing unit 30, and the belt cleaning unit 25 are controlled **[so as]** to ~~{keep}~~ **[be kept]** in an inoperable position~~(, that is, electric inputs to these components are cut off or )~~**[. In other words, electric inputs are cut off from the second transfer mechanism 22, the fixing unit 30, and the belt cleaning unit 25 or else,]** these components are moved away from the intermediate transfer belt 10.

A process for forming a second toner image[,] in a ~~{like}~~ **[similar]** manner ~~{as}~~ **[to that]** described above on the photoconductive drum 1[,] is started when the intermediate transfer belt 10 ~~{carrying}~~**[, which carries]** the first toner image[,] is

advanced to a predetermined position. At the same time, the recording sheet P ~~{is started}~~ **[starts]** to be transferred from the sheet cassette 26 or from the manual sheet inlet 35. When the sheet ~~{feed}~~ **[feeding]** roller 27 or 36 is rotated in ~~{a direction indicated by an arrow in Fig. 2}~~ **[either a counterclockwise direction or a clockwise direction, respectively, as shown by the arrows in FIG. 2]**, an uppermost recording sheet P is transferred towards the registration rollers 28.

As the intermediate transfer belt 10, **which is** moved in synchronism with the photoconductive drum 1 ~~{is rotated, }~~ **[rotates,]** the first toner image~~[,]~~ carried on the intermediate transfer belt 10~~[,]~~ is advanced to a position where the intermediate transfer belt 10 contacts the photoconductive drum 1.

The recording sheet P is advanced by the registration rollers 28 to a contact position between the photoconductive drum 1 and the intermediate transfer belt 10 such that the second surface of the recording sheet P contacts the surface of the photoconductive drum 1. Then, the second toner image~~[, which is]~~ formed on the photoconductive drum 1~~[,]~~ is transferred onto the second surface of the recording sheet P by the first transfer mechanism 21. During this process, the recording sheet P is transferred by the registration rollers 28 such that the second toner image is transferred onto a proper position ~~{in}~~ **[on]** the second surface of the recording sheet P.

During a time when the second toner image is transferred from the photoconductive drum 1 to the second surface of the recording sheet, the first surface of the recording sheet P contacts the surface of the intermediate transfer belt 10 on which the first toner image is carried. When the recording sheet P passes through a transfer region of the second transfer mechanism 22, a voltage is applied to the second transfer

mechanism so that the first toner image is transferred onto the first surface of the recording sheet P.

Thus, the first and second images are attached ~~{on}~~ **[to]** the first and second surfaces, respectively, of the recording sheet P. The recording sheet P is further transported to a fixing region of the fixing unit 30 by the intermediate transfer belt 10. The fixing unit 30 ~~{is moved such}~~ **[moves slightly downwardly so]** that the upper fixing roller 19 ~~{presses}~~ **[is pressed into contact with]** the lower fixing roller 18 ~~{via}~~ **[and]** the intermediate transfer belt 10 **[is held therebetween]**. Thereby, the first and second toner images are fixed to the first and second surfaces, respectively, at the same time. After the transfer process, the recording sheet P is kept in contact with the intermediate transfer belt 10 ~~{and therefore}~~ **[so that]** the toner images ~~{are}~~ **[can be]** kept in ~~{desirable conditions}~~ **[a desirably fixed state,]** without wobbling.

After the fixing process, the recording sheet P is separated from the intermediate transfer belt 10 at the roller 11 due to a relationship between a stiffness of the recording sheet P and a curvature of the roller 11. The recording sheet P is further transferred to either the stacker 40 or the ejection tray 44 depending upon the position of the switching pawl 42.

When the recording sheet P is output to the stacker 40, the first surface of the recording sheet P faces down in the stacker 40. Therefore, when stacking in **[increasing]** page **[number]** order is desired, the second toner image ~~{is needed}~~ **[needs]** to be ~~{firstly}~~ generated **[first]** and retained on the intermediate transfer belt 10 and the first toner image **[needs to be]** generated ~~{afterwards is}~~ **[after the second toner image and then,]** transferred onto the recording sheet P directly from the

photoconductive drum 1. ~~{More specifically}~~ **[In other words]**, the first toner image is to be recorded on the second page and the second toner image is to be recorded on the first page of the recording sheet P. For the third page and onwards, this sequential order ~~{is needed}~~ **[needs]** to be maintained in the same manner. That is, when an even page **[number]** has an image **[thereon]**, this image is first generated and preserved on the intermediate transfer belt 10 and an image ~~{of}~~ **[, on]** the following odd page **[number,]** is then generated so as to be transferred from the photoconductive drum 1 to the recording sheet P. In this case, the sequential order of the ~~{image forming in}~~ page numbers **[of the image forming operation]** is as follows~~{,}~~**[:]**

2 ~~{=}~~**[→]** 1 ~~{=}~~**[→]** 4 ~~{=}~~**[→]** 3 ~~{=}~~**[→]** 6 ~~{=}~~**[→]** 5 ~~{= \_ \_ E \_ \_ E \_ \_ E \_ \_ E}~~**[→ ...]** .

In addition, the output order of the **[sheet numbers of the]** recording sheets P ~~{in sheet numbers is expressed as,}~~ **[is as follows:]**

1st sheet ~~{=}~~**[→]** 2nd sheet ~~{=}~~**[→]** 3rd sheet ~~{= \_ \_ E \_ \_ E \_ \_ E \_ \_ E}~~**[→ ...]** .

That is, the image forming **[operation]** is performed in increasing order of sheet numbers. ~~{The}~~ **[For example, the]** first and second pages are recorded on the first sheet, the third and fourth pages are recorded on the second sheet, the fifth and sixth pages are recorded on the third sheet, and so on~~{, for example}~~.

Some other image forming apparatuses ~~{performs}~~ **[perform]** the image forming in a reverse order, ~~{that is}~~ **[i.e.]**, images of the last page and ~~{one}~~ **[the page]** before the last ~~{pages}~~ **[page]** are recorded on ~~{a}~~ **[the]** sheet ~~{first}~~ **[which is]** output **[first]**. This sheet may be referred to as the first sheet in relation to these apparatuses. However, in the printer 100, the first sheet in a double-~~{side}~~ **[sided]** recording **[operation]** is defined as a sheet on which images of the first and second pages are

recorded, but not as a sheet which is first output. In a single-~~{side}~~ **[sided]** recording **[operation]**, the first sheet is defined as a sheet on which the first page is recorded. The term double-~~{side}~~ **[sided]** recording **[operation]** means a recording mode in which recording is performed on both **[the first and second]** sides of a recording sheet. The term single-~~{side}~~ **[sided]** recording **[operation]** means a recording mode in which recording is performed on a single side of a recording sheet.

When the recording sheet P is ejected to the ejection tray 44, the second surface ~~{having}~~**[, which has]** the second toner image from the photoconductive drum 1~~[,]~~ faces ~~{up}~~ **[upwardly]**. Therefore, when stacking in **[increasing]** page **[number]** order is desired in the ejection tray 44, the first toner image ~~{is needed}~~ **[needs]** to be ~~{firstly}~~ generated **[first]** and retained on the intermediate transfer belt 10 and **[then,]** the second toner image **[needs to]** generated afterwards ~~{is}~~ **[and]** transferred onto the recording sheet P directly from the photoconductive drum 1. It ~~{is needed to}~~ **[must]** be arranged that the first toner image is recorded on the first page and the second toner image is recorded on the second page of the recording sheet P. This sequential order is maintained in the same manner for the third page and onwards. That is, when an odd~~[-numbered]~~ page has an image **[thereon]**, this image is ~~{first}~~ generated **[first]** and preserved on the intermediate transfer belt 10 and an image of the following even~~[-numbered]~~ page is then generated **[afterwards]** so as to be transferred from the photoconductive drum 1 to the recording sheet P. In this case, the sequential order of the ~~{image forming in}~~ page numbers **[of the image forming]** is as follows~~{;}~~**[:]**

1 ~~{=}~~**[→]** 2 ~~{=}~~**[→]** 3 ~~{=}~~**[→]** 4 ~~{=}~~**[→]** 5 ~~{=}~~**[→]** 6 ~~{= \_ E \_ E \_ E \_ E}~~**[→ ...]** .

In addition, an output order of the [sheet numbers of the] recording sheets P {in sheet numbers is expressed as;} [is as follows:]

1st sheet {=}[-] 2nd sheet {=}[-] 3rd sheet {==E=E=E=E}[- . . .] .

That is, the image forming is performed in increasing order of sheet numbers, as is the case with the stacking in the stacker 40.

In {any case,} either [case of] stacking in the stacker 40 or in the ejection tray 44, the image forming [operation] is performed in increasing order of sheet numbers so that the user can easily find {a} [any] sheet {to see}. In many cases, the user may instantly check if the image forming [operation] is [being] performed in a manner desired by the user by {seeing,} particularly{,} [reviewing] the first page or [the] first few pages. When the image forming [operation] is performed in decreasing order of sheet numbers, {that is} [i.e.], the last sheet having the last page is {first} output [first], the user needs to wait until the first sheet having the first page [thereon] is output.

In addition, {the} [when an] image forming [operation is] performed in increasing order of sheet numbers {facilitates}[, the] handling of the sheets {at an occurrence of} [is facilitated when] a paper jam [occurs] in the printer 100. After eliminating [the] conditions {of} [leading to] the paper jam, the user simply needs to instruct the printer 100 to start the image forming [operation] from the page {included in} [including] the jammed sheet. This kind of paper jam handling would help the user, particularly, when the printer 100 is in a mode in which the process of eliminating an error condition by the paper jam is not automated and the user is required to cope with the problem.



In the printer 100, **[during a double-sided recording mode,]** the user can select ~~{in the double-side recording mode}~~ either the stacker 40 or the ejection tray 44 ~~{through}~~ **[via]** a control panel 50 ~~{(Fig. 3), explained later. When the user select in the}~~ **[(to be explained in more detail below), as shown in FIG. 3. During a]** double-side recording mode~~[],~~ **[when the user selects]** either one of the stacker 40 and the ejection tray 44, the image forming **[operation]** is controlled **[so as]** to be performed in the above-described sequence ~~{so that}~~ **[and thus,]** the recording sheets **[P]** are ejected to the designated place in increasing order of sheet numbers. Controlling the order of the image forming **[operation,]** according to the order of sheet numbers~~[],~~ is performed by a control unit~~{, which is not shown}~~ **[(not shown)]**.

Accordingly, the user simply needs to select one of the stacker 40 and the ejection tray 44 without paying attention to a relationship between the order of sheet numbers and the order of the image forming **[operation]**. Thus, the printer 100 can perform the double-~~{side}~~ **[sided]** recording **[operation]** without requiring the user to perform complex ~~{operations}~~ **[tasks]**. The order of the image forming **[operation]** can be switched from one to another with a known technique associated with storage of image data into a memory.

In the printer 100, when the recording sheet **[P]** is transferred from the manual sheet inlet 35 to the ejection tray 44, ~~{a passage of}~~ the recording sheet ~~{is}~~ **[P passes through the printer 100 in an]** approximately straight **[manner]**. Therefore, a thick sheet ~~{including}~~ **[, such as]** a thick paper sheet, an overhead-projector sheet, etc., is preferably inserted ~~{in}~~ **[into]** the manual sheet inlet 35 and is ejected to the ejection tray 44 through ~~{the}~~ **[an approximately]** straight passage. Thus, the thick sheets can

be processed in the double-~~{side}~~ **[sided]** recording **[mode]** and be output in the appropriate page **[number]** order, without causing problems ~~{in-running}~~ **[of being too thick while passing]** through the ~~{passage}~~ **[printer 100]**.

As for a standard sheet, it can be sent from either the sheet cassette 26 or the manual sheet inlet 35 and be ejected to either the stacker 40 or the ejection tray 44. In this case, the sheets can be output in the double-~~{side recorded}~~ **[sided recording]** mode in the appropriate page **[number]** order. This sequence may be set as a default since the standard sheet is normally a frequently used sheet.

In a typical image forming **[operation]**, a mirror image is formed on the photoconductive drum 1 and is directly transferred onto the recording sheet P, thereby turning into a normal image. However, when the intermediate transfer belt 10 is involved, that is, the mirror image on the photoconductive drum 1 is transferred to the intermediate transfer belt 10 and is transferred to the recording sheet P, the mirror image is formed on the recording sheet P. Therefore, a normal image is formed on the photoconductive drum 1 for the first surface of the recording sheet P and a mirror image is formed on the photoconductive drum 1 for the second surface of the recording sheet P. This image alternation in a normal or mirror mode can be performed by controlling the exposure unit 7 using a known image processing technique.

The belt cleaning unit 25[, ] separated away from the intermediate transfer belt 10[, ] is turned after the toner image is transferred onto the recording sheet P from the intermediate transfer belt 10 such that the cleaning roller 25a contacts the intermediate transfer belt 10. Thereby, the residual toner is removed from the intermediate transfer belt 10 ~~{to}~~ **[and onto]** the cleaning roller 25a and is **[then]** scraped off the cleaning

roller 25a by the cleaning blade 25b. The scraped toner is collected by the toner return mechanism 25c to the toner collection container (not shown). The residual toner[, **after having heat**] applied ~~{with heat}~~ **[thereto]** by the lower and upper fixing rollers 18 and 19[, ] is prone to be removed from the intermediate transfer belt 10 before it is cooled. Therefore, the belt cleaning unit 25 is preferably arranged upstream from the cooling rollers 16.

After the cleaning process, the intermediate transfer belt 10 passes through the cooling region where the cooling rollers 16 cool the intermediate transfer belt 10. As an alternative to the cooling rollers 16, a heat pipe may be arranged to contact the inside surface of the intermediate transfer belt 10 or an application of an air flow to the intermediate transfer belt 10[, ] after the fixing process[, ] may also be effective.

Next, procedures of the single-~~{side}~~ **[sided]** recording **[operation]** in the printer 100 ~~{are}~~ **[will be]** explained. ~~{A}~~ **[The]** procedure of ~~{the}~~ **[a]** single-~~{side}~~ **[sided]** recording ~~{using}~~ **[operation in which]** the stacker 40 is **[used is]** different from ~~{that using}~~ **[the procedure of a single-sided recording operation in which]** the ejection tray 44 **[is used]**. When the recording sheets P are output into the stacker 40, the process of transferring the toner image onto the intermediate transfer belt 10 is eliminated and the toner image formed on the photoconductive drum 1 is directly transferred onto the recording sheet P. In this case, the toner image on the photoconductive drum 1 is a mirror image and is transferred onto the recording sheet P in ~~{a}~~ **[the]** form of a normal image.

In ~~{Fig}~~ **[FIG]. 2**, the recording sheet P is fed to the contact position between the photoconductive drum 1 and the intermediate transfer belt 10 in synchronism with

the movement of the toner image on the photoconductive drum 1 and the toner image is transferred onto the upper surface of the recording sheet P facing the photoconductive drum 1 by the action of the first transfer mechanism 21.

In this procedure, the second transfer mechanism 22 is not operated. The recording sheet P is moved with the intermediate transfer belt 10 and the toner image is fixed on the recording sheet P through the fixing unit 30. After that, the recording sheet P is separated away from the intermediate transfer belt 10 and is lifted ~~{upward}~~ **[upwardly]** along the switching pawl 42, the guide members 31a and 31b, the transfer rollers 33, and the ejection rollers 34. Then, the recording sheet P is ejected in the direction **[of arrow]** A1 so as to be ejected face down in the stacker 40. As a result, a plurality of the recording sheets P are stacked face down in increasing ~~{number}~~ **[order]** of sheet numbers. That is, although the image forming is performed in increasing order of page numbers from the first page, the user can have the plurality of the recording sheet P in increasing order of page numbers with the first page on ~~{its}~~ **[the]** top **[of the stack]** when removing the stack of the recording sheets P from the stacker 40. With this configuration, the sequential order of the **[page numbers the]** image forming ~~{in-page numbers}~~ **[operation]** is as follows~~{;}~~**[:]**

1 ~~{=}~~**[→]** 2 ~~{=}~~**[→]** 3 ~~{=}~~**[→]** 4 ~~{=}~~**[→]** 5 ~~{=}~~**[→]** 6 ~~{=E=E=E=E}~~**[→ ...]** .

In addition, the output order of the **[sheet numbers of the]** recording sheets P in ~~{sheet numbers in}~~ this case is ~~{expressed as;}~~ **[as follows:]**

1st sheet ~~{=}~~**[→]** 2nd sheet ~~{=}~~**[→]** 3rd sheet ~~{=E=E=E=E}~~**[→ ...]** .

When the ejection tray 44 is used to stack the recording sheets P, the toner image~~[,]~~ formed on the photoconductive drum 1~~[,]~~ is transferred onto the intermediate

transfer belt 10 with the first transfer mechanism 21 and is turned with the rotation of the intermediate transfer belt **[10]**. The recording sheet P is fed to the contact position[,] between the photoconductive drum 1 and the intermediate transfer belt 10[,] in synchronism with the movement of the toner image on the intermediate transfer belt 10. Then, the toner image[,] on the intermediate transfer belt 10[,] is transferred onto the lower surface of the recording sheet P by the second transfer mechanism 22. After that, the recording sheet P is separated away from the intermediate transfer belt 10 and is straightly transferred via the switching pawl 42 in the direction **[of the arrow]** A2 so as to be ejected face down in the ejection tray 44. As a result, a plurality of the recording sheets P are stacked face down in increasing {number} **[order]** of {sheet} **[page]** numbers. That is, although the image forming **[operation]** is performed in increasing order of page numbers {from} **[starting with]** the first page, the user can have the plurality of {the} recording {sheet} **[sheets]** P in increasing order of page numbers **[starting]** with the first page on {its} **[the]** top **[of the stack]** when removing the stack of the recording sheets P from the ejection tray 44. With this configuration, the sequential order of the {image-forming in} page numbers **[of the image forming operation]** is as follows{;}{:}

1 {""}[→] 2 {""}[→] 3 {""}[→] 4 {""}[→] 5 {""}[→] 6 {""\_E\_E\_E\_E}[→ ...] .

In addition, the output order of the **[sheet numbers of the]** recording sheets P {in-sheet numbers is expressed as;} **[is as follows:]**

1st sheet {""}[→] 2nd sheet {""}[→] 3rd sheet {""\_E\_E\_E\_E}[→ ...] .

As described above, in the single-{side} **[sided]** recording **[operation]**, the same order of the **[page numbers in the]** image forming {in-page numbers} **[operation]**

is applied to both cases of using the stacker 40 and the ejection tray 44 and ~~{a}~~ **[the only]** difference between the two cases is that the toner image is transferred onto the upper surface or the lower surface of the recording sheet P.

In the printer 100, ~~{the user can select in}~~ **[when using]** the single-~~{side}~~ **[sided]** recording mode~~[, the user can select]~~ either the stacker 40 or the ejection tray 44 ~~{through}~~ **[via]** the control panel 50 ~~{(Fig. 3), explained later. When the user select in the single-side recording mode }~~ **[(to be explained in more detail below), as shown in FIG. 3. When using the single-sided recording mode, the user may select]** either one of the stacker 40 and the ejection tray 44, **[and then,]** the image forming **[operation]** is controlled to be performed in the above-described sequence so that the recording sheets P are ejected to the designated place in increasing order of sheet numbers. Accordingly, the user simply needs to select one of the stacker 40 and the ejection tray 44 without paying attention to a relationship between the order of sheet numbers and the order of the image forming **[operation]**. Thus, the printer 100 can perform the double-~~{side}~~ **[sided]** recording **[operation]** without requiring the user to perform **[any]** complex ~~{operations}~~ **[tasks]**.

In the single-~~{side}~~ **[sided]** recording mode, a thick sheet ~~{including}~~ **[, such as]** a thick paper sheet, an overhead-projector sheet, etc., is preferably inserted in the manual sheet inlet 35 and is ejected to the ejection tray 44 through ~~{the}~~ **[a fairly]** straight passage **[in the approximate middle of the image forming apparatus or printer 100]**. Thus, the thick sheets can also be processed in ~~{the}~~ **[a]** single-~~{side}~~ **[sided]** recording **[operation]** and be output in the appropriate page **[number]** order,

without causing problems in ~~{running}~~ **[being run]** through the passage **[in the approximate middle of the image forming apparatus or printer 100]**.

As described above, in the printer 100, the recording sheets P are output in ~~{the}~~ **[an]** increasing order of sheet numbers[, ] such as the first page, the second page, the third page, and so on ~~{in both cases of the single-side and double-side recordings}~~ **[, in both the cases of a single-sided recording operation and a double-sided recording operation]**, regardless of whether the stacker 40 or the ejection tray 44 is selected. Therefore, in both cases, the user can easily check if the image forming **[operation]** is performed in a desired manner. In addition, in both cases **[of single-sided and double-sided recording operations]**, the user can easily instruct the printer 100 to restart the image forming operation upon **[the]** occurrence of an error ~~{of the}~~ **[, such as a] paper jam**.

~~{Fig}~~ **[FIG]. 3** shows the control panel 50 provided ~~{to}~~ **[on]** the printer 100. As shown in ~~{Fig}~~ **[FIG]. 3**, the control panel 50 includes a ~~{LCD-}~~liquid crystal display ~~{)}~~ **[or LCD] 51** and various function buttons. Among the various function buttons, an online button 52 switches the ~~{condition of the}~~ printer 100 between **[being in an] online [condition]** and **[an] offline [condition]**. A reset button 53 resets ~~{the}~~ present conditions to default conditions. A sheet selection button 54 designates ~~{a}~~ **[the] type of {the} recording sheet P [to be used]**. For example, when an extraordinary type of sheet[, ] such as a thick sheet is used, the sheet selection button 54 is pressed to allow selection of such sheet. A double-~~{side}~~ **[sided]** recording button 55 makes the double-~~{side}~~ **[sided]** recording mode effective. An input enabling button 56 enables various inputs. By pressing the input enabling button 56, various items can be displayed

on the LCD 51. To find and select a desired item, an up-scrolling button 58 ~~{having}~~ [, **being**] a black ~~{triangle}~~ **[triangular]** mark[, scrolls ~~{upwards}~~ the items displayed on the LCD 51 **[upwardly]** and a down-scrolling button 59 ~~{having a black reversed triangle mark scrolls the items downwards}~~ [, **being a black triangular mark in a reversed direction from the above-described black triangular mark of the up-scrolling button 58, scrolls the items downwardly**]. An execution button 57 executes the designation of the selected item. The input enabling button 56 ~~{covers the items of selecting}~~ **[allows for the selection of ]**the sheet feed unit (i.e., the sheet cassette 26 or the manual sheet inlet 35) and ~~{of selecting}~~ **[the selection of ]**the output tray (i.e., the stacker 40 or the ejection tray 44).

In the printer 100, the double-~~{side}~~ **[sided]** recording mode is selected by a press of the double-~~{side}~~ **[sided]** recording button 55. During this selection, selection of the sheet cassette 26 and the manual sheet inlet 35 and selection of the stacker 40 and the ejection tray 44 can be performed with the input enabling button 56. This selection may also be performed in a combination of the sheet feed unit and the output tray. In the single-~~{side}~~ **[sided]** recording mode, selections of the sheet feed unit and the output tray are allowed.

With the above-described structure, the printer 100 can feed the recording sheets P from the designated sheet feed unit and output the recording sheets P to the designated output tray in an appropriate page **[number]** order in both the single-~~{side}~~ **[sided]** recording **[operation]** and the double-~~{side}~~ **[sided]** recording **[operation]** by properly designating the sheet feed unit and the output tray. Thus, the user can obtain



the outputs in the page **[number]** order without paying attention to the order of the image forming **[operation]** relative to the sheet order.

As described above, when a thick sheet ~~{including}~~ **[, such as]** a thick paper sheet, an **[overhead projector or]** OHP sheet, and so on~~[,]~~ is used, such a sheet is preferably inserted from the manual sheet inlet 35 and is ejected to the ejection tray 44 so as to run along a straight passage **[in the approximate center of the printer 100]**. In the printer 100, the manual sheet inlet 35 and the ejection tray 44 are automatically selected when a thick sheet is selected with the sheet selection button 54. Accordingly, when the user desires outputs in **[increasing]** page **[number]** order using a thick sheet in either the single-~~{side}~~ **[sided]** recording **[mode]** or the double-~~{side}~~ **[sided]** recording **[mode]**, the user needs to select the thick sheet using the sheet selection button 54 without paying attention to the selections of the sheet feed unit and the output tray and to the order of the image forming **[operation]** relative to the sheet numbers.

In the printer 100, the stacker 40 is designated as a regular sheet feed unit in both the single-~~{side}~~ **[sided]** recording **[mode]** and the double-side recording **[mode]** when a regular sheet is selected to be used so that the recording sheets P are stacked in an appropriate **[increasing]** page **[number]** order in the stacker 40 where the user can easily take out the stack of the recording sheets P.

In this way, the output tray is automatically designated in accordance with the selection of the sheet type and the order of the image forming **[operation]** is controlled such that the recording sheets P are ejected to the designated output tray in the **[increasing]** page **[number]** order. Thus, the user can obtain the stack of the recording

sheets P in the **[increasing]** page **[number]** order by simply selecting the type of the recording sheet P.

As shown in ~~{Fig}~~ **[FIG]. 2**, the printer 100 is provided with a sensor 38 at a position inside **[of]** the printer 100 and close to the manual sheet inlet 35. The sensor 38 detects a condition of **[whether]** the manual sheet inlet 35 ~~{whether it}~~ is closed or open. When the sensor 38 detects that the manual sheet inlet 35 is open, the printer 100 automatically selects the thick sheet mode and the ejection tray 44.

With this configuration, **[when the user decides to use recording sheets P that are thick,]** the user can simply place the **[thick]** recording sheets ~~{to}~~ **[P at]** the manual sheet inlet 35 by ~~{opening it when using the thick sheets, thereby obtaining the stack of the recording sheets P in an appropriate page }~~**[first opening the manual sheet inlet 35 to reveal the plate 37 and then set the thick recording sheets P on the plate 37. Thus, after an image forming operation has been performed and a stack of recording sheets P, in an appropriate increasing page number]** order in the ejection tray 44**[, is obtained]** in both the single-~~{side}~~ **[sided]** recording **[mode]** or the double-~~{side}~~ **[sided]** recording **[mode]**.

In the printer 100, the switching of the sheet ejection passage is achieved by a simple mechanism using a single component~~[,]~~ such as a switching pawl 42, ~~{as}~~ **[which was]** described above.

In addition, the printer 100 allows the selections of various ~~{operation}~~ **[operating]** conditions from an external host system connected to the printer 100 as well as through the control panel 50, as **[was]** described **[with respect to FIG. 3]** above.

Accordingly, the user of the external host system can remotely select the sheet feed unit, the output tray, the sheet type, and so on.

Next, a color printer 100B[, ] according to the embodiment of the present invention ~~{is}~~ [, **will be**] explained with reference to ~~{Fig}~~ **[FIG]**. 4. The color printer 100B is similar to the printer 100 of ~~{Fig}~~ **[FIG]**. 2, except for a revolver type development unit 5R and a mechanism for moving the intermediate transfer belt 10 ~~{to separate it}~~ away from the photoconductive drum 1. Components having the same functions as those in the printer 100[, **shown in FIG. 2,**] are labeled with the same ~~{references and }~~ **[reference characters and will not be explained again,]** the following ~~{discussions focus to}~~ **[discussion being focused on]** the difference between the two printers.

As shown in ~~{Fig}~~ **[FIG]**. 4, the revolver type development unit 5R is rotatable and includes development stations 5a-5d. The revolver type development unit 5R is rotated so as to switch the development stations 5a ~~{=}~~ **[-]** 5d from one to another **[so as]** to ~~{locate}~~ **[be located]** at a **[particular]** development position. The development stations 5a ~~{=}~~ **[-]** 5d contain color toners that enable a full color development. For example, the development stations 5a, 5b, 5c, and 5d contain yellow, magenta, cyan, and black toner, respectively. To form a mono-chrome toner image, the development station 5d is moved **[so as]** to ~~{locate}~~ **[be located]** at the development position and the image forming **[operation]** in the **[increasing]** page **[number]** order is performed in a manner similar to that performed by the printer 100 of ~~{Fig}~~ **[FIG]**. 2.

To form a full color image, the exposure unit 7 is caused to generate light information to be developed with the yellow toner and to scan the charged surface of the

photoconductive drum 1 with the light information so as to form an electrostatic latent image, while the intermediate transfer belt 10 is **[moved away and]** separated ~~{away}~~ from the photoconductive drum 1. The development station 5a is moved to the development position and is activated to develop the electrostatic latent image with the yellow toner. Likewise, a magenta toner image is formed on the photoconductive drum 1 overlaying the yellow toner image. After that, a cyan toner image is generated to further overlay the yellow and the magenta toner images. Finally, a black toner image is formed and ~~{overlay}~~ **[overlays all three of]** the yellow, magenta, and cyan toner images on the photoconductive drum 1. Thereby, a four color toner image is formed on the surface of the photoconductive drum 1 which is rotated four times during the generation of the four color toner image.

After a completion of the four color toner image, the intermediate transfer belt 10 is moved ~~{to}~~ **[into]** contact **[with]** the photoconductive drum 1. At the same time, the recording sheet P is transferred, in synchronism with the movement of the four color toner image, to the contact position between the photoconductive drum 1 and the intermediate transfer belt 10. The four color toner image is then transferred onto the recording sheet P by the action of the first transfer mechanism 21.

In the double-~~{side}~~ **[sided]** recording **[mode]**, the intermediate transfer belt 10 is moved ~~{to}~~ **[into]** contact **[with]** the photoconductive drum 1 when the first toner image is formed on the photoconductive drum 1 so that the first toner image is transferred onto the intermediate transfer belt 10 by the first transfer mechanism 21. The intermediate transfer belt 10 is then moved away **[and separated]** from the photoconductive drum 1 and is brought into a standby mode. After that, the second

toner image, i.e., the second four color toner image, is formed on the photoconductive drum 1. When the second toner image is formed on the photoconductive drum 1, the intermediate transfer belt 10 is controlled ~~{to start running}~~ **[in]** such **[a manner]** that the leading edge of the second toner image on the photoconductive drum 1 meets the leading edge of the first toner image on the intermediate transfer belt 10. The intermediate transfer belt 10 is moved ~~{to}~~ **[into]** contact **[with]** the photoconductive drum 1 and the recording sheet P is fed to the contact position between the photoconductive drum 1 and the intermediate transfer belt 10 in synchronism with the movement of the second toner image on the photoconductive drum 1. The second toner image on the photoconductive drum 1 is transferred onto the second surface of the recording sheet P by the action of the first transfer mechanism 21 and the first toner image on the intermediate transfer belt 10 is transferred onto the first surface of the recording sheet P by the action of the second transfer mechanism 22. Thus, the first and second toner images are transferred onto the first and second surfaces of the recording sheet P. The recording sheet P is further transported~~[, while]~~ in ~~{a}~~ close contact with the intermediate transfer belt 10~~[,]~~ to the fixing unit 30. In both single-~~{side}~~ **[sided]** and double-~~{side}~~ **[sided]** recording modes, processes ~~{after}~~ **[occurring after the recording sheet P has been transferred to]** the fixing unit **[30]** are similar to those described in the operation of the printer 100 **[as shown in FIG. 2]**.

As in the case of the printer 100 **[of FIG. 2]**, the toner image generations are executed in an increasing order of page numbers and the recording sheets P are output in an increasing order of sheet numbers in both single-~~{side}~~ **[sided]** and double-~~{side recordings}~~ **[sided recording modes]** in the color printer 100B, regardless of which

output tray is selected. Therefore, the user can easily check whether the images are generated in a desired form and can easily handle the error conditions caused by ~~the~~[, for instance, a] paper jam.

As an alternative to the revolving type development unit 5R, the color printer 100B may include a tandem type development unit while performing the same function as described above. In this case, a photoconductive belt is used in place of the photoconductive drum 1 and a plurality of development stations included in the tandem type development unit are arranged along the photoconductive belt.

Next, an image forming apparatus[,] according to the present invention[,], is explained with reference to ~~Figs~~ [FIGS]. 5 - 7. The image forming apparatus of ~~Fig~~ [FIG]. 5 includes the printer 100 of ~~Fig~~ [FIG]. 2 and a scanner 200. The scanner 200 is provided on the top thereof with an ~~ADF (~~automatic document feeder ~~)~~ [or ADF] 250, as shown in ~~Fig~~ [FIG]. 5. The [automatic document feeder or] ADF 250 automatically feeds a sheet-formed original S which is placed on the [automatic document feeder or] ADF 250. The image forming apparatus of ~~Fig~~ [FIG]. 5 can perform various functions including[,], copying the image of an original, transmitting the image of the original through a facsimile procedure, outputting data on a sheet in accordance with signals sent from an external computer, and so on.

~~Fig~~ [FIG]. 6 shows an external view of the image forming apparatus of ~~Fig~~ [FIG]. 5. As shown in ~~Fig~~ [FIG]. 6, the sheet cassette 26 is capable of being pulled out in a direction indicated by an arrow C. An upper part of the printer 100 serves as the stacker 40.

The scanner 200 is capable of performing **[either one of:]** a sheet scanning[,] in which an original is read[,] while ~~{it is}~~ **[being]** moved[;] and a book scanning[,] in which an original is read by a moving member. In the scanner 200, contact glasses 62 and 63 are arranged on an upper part of a frame 61. The contact glass 62 ~~{is}~~ **[has a]** greater **[surface area]** than **[that of]** the contact glass 63 and **[the contact glass 62]** is used as a plate on which an original is placed and ~~{is}~~ read ~~{in the}~~ **[during a]** book scanning mode. The contact glass 63 is used when an original is read[,] as it is transferred by the ~~{SDF}~~ **[automatic document feeder or ADF]** 250 in the sheet scanning mode.

Inside the scanner 200, a first moving member 65 ~~{including}~~[, **which includes**] a light source 64 and mirrors[,] and a second moving member 66 ~~{including}~~[, **which includes**] mirrors[,] are arranged so as to slide ~~{in}~~ parallel to the contact glass 62. The scanner 200 employs a known optical system in which the first moving member 65 is moved at ~~{a}~~ **[one]** half ~~{-}~~ **[of the]** speed of the second moving member 66. In the book scanning mode, an original is read while the first and second moving members 65 and 66 are moved. In the sheet scanning mode, the first and second moving members 65 and 66 are stopped at positions, as shown in ~~{Fig}~~ **[FIG]. 5**, and the original is read at a position of the contact glass 63 as the original is moved relative to the contact glass 63.

In both sheet and book scanning modes, an original is irradiated with light of the light source 64 and an image of the original is focused on a fixed lens 67 and is captured by a ~~{CCD (}charge-coupled device {)}~~ ~~68~~ **[or CCD 68,]** which then converts the captured light information into an analog signal. Based on this analog signal, digital image data is generated. After that, the digital image data is subjected to various kinds

of signal processing so as to be used as facsimile information, print information to be printed on an image forming apparatus[,], such as the printer 100, image information to be edited by a computer, and so on.

The **[automatic document feeder or]** ADF 250 includes a sheet bed 71[,], on which a stack of originals to be read[,], are placed. The sheet bed 71 is provided with a moving plate 72. As shown in ~~{Fig}~~ **[FIG]**. 5, a sheet transfer mechanism 73 of the **[automatic document feeder or]** ADF 250 is formed in a left side portion of the sheet bed 71. The sheet transfer mechanism 73 is provided with a sheet ~~{feed}~~ **[feeding]** roller 74 arranged at an upper ~~{top}~~ **[surface]** of the moving plate 72, a pair of separation rollers 75, a pair of transfer rollers 76, an image sensor 78, a transfer roller 77 arranged at a position facing the image sensor 78, a sheet pressure plate 79, a transfer roller 80, and a pair of ejection rollers 81. Under the sheet bed 71, an ejection tray 82 is arranged and a space[,], between the sheet bed 71 and the ejection tray 82[,], is used as an ejection space. A pressure plate 70 is arranged under the ejection tray 82 and holds ~~{under pressure}~~ an original[,], placed on the contact glass 62[, **under pressure**]. A bottom surface of the pressure plate 70 is adhered with a white sheet 69. The upper portion of the **[automatic document feeder or]** ADF 250[,], including the pressure plate 70[,], is tilted ~~{upwards}~~ **[upwardly]** so that the contact glasses 62 and 63 are exposed. The pressure plate 70 is configured to press a thick original such as a book. It is convenient to use the **[automatic document feeder or]** ADF 250 when originals are of sheet type. The **[automatic document feeder or]** ADF 250 is detachably mounted ~~{to}~~ **[on]** the image forming apparatus.



A stack of sheet originals are placed on the moving plate 72 of the sheet bed 71 with the first page ~~{up}~~ **[facing upwardly]**. The sheet feed roller 74 is rotated in a direction indicated by an arrow (i.e., clockwise in ~~{Fig}~~ **[FIG]. 5**) so that the uppermost sheet in the stack of originals is transferred to the sheet transfer mechanism 73. The pair of separation rollers 75 feed the originals sheet by sheet. The original[, ] fed from the moving plate 72[, ] is transferred through a sheet path, via the transfer rollers 76, 77, and 80, to the ejection rollers 81[, ] and is ejected in a direction B. ~~{The}~~ **[Therefore, the]** original is ~~{therefore stack}~~ **[stacked]** in the ejection tray 82 with the first page ~~{down}~~ **[facing downwardly]**.

During the above process, the original passes by the image sensor 78 with the second surface facing a reading part of the image sensor 78 so that the image sensor 78 reads the second page. After passing by the image sensor 78, the original passes through a space between the sheet pressure plate 79 and the contact glass 63 with the first surface facing the contact glass 63 so that the scanner 200 reads the first page of the original. When the scanner 200 reads an original passing by the contact glass 63, the first and second moving members 65 and 66 are stopped at the reading position under the contact glass 63.

Thus, when the **[automatic document feeder or]** ADF 250 is used, the first and second surfaces of an original are read at two different positions during a time of sheet transfer. Hereinafter, a reading mechanism[, ] that reads a moving original of sheet type[, ] is referred to as a first reading mechanism R1 and a reading mechanism[, ] that reads a stationary original with the moving members 65 and 66[, ] is referred to as a second reading mechanism R2.

In ~~{Fig}~~ **[FIG]**. 5, the first reading mechanism R1 is indicated as ~~{presenting}~~ **[representing]** the image sensor 78 of the **[automatic document feeder or]** ADF 250 and the second reading mechanism R2 is indicated in the middle of the scanner 200. The scanner 200 is regarded as the second reading mechanism R2 when reading a stationary original pressed by the pressure plate 70. However, the scanner 200 is regarded as a part of the first reading mechanism R1 when an original of sheet type is read[,], while it is transferred by the **[automatic document feeder or]** ADF 250 with the moving members 65 and 66 stopped at the reading position under the contact glass 63. That is, the first reading mechanism R1 includes a part centered with the image sensor 78 of the **[automatic document feeder or]** ADF 250 and a part which is the scanner 200 with the moving members 65 and 66 stopped at the reading position under the contact glass 63.

When an original ~~{of}~~ **[to be read is a]** transparent sheet ~~{is read}~~, a color of the pressure plate may be read as a background. Therefore, the pressure plate 70 ~~{is adhered with}~~ **[has]** the white sheet 69 **[adhered]** on the surface facing the original. Likewise, the transfer roller 77 and the sheet pressure plate 79 are ~~{colored in}~~ **[made so as to be]** white **[in color]**.

**FIG**~~1~~  
**Fig**~~1~~. 7 is a **[cross-]**sectional ~~{-}~~view of the image sensor 78. As shown in ~~{Fig}~~ **[FIG]**. 7, the image sensor 78 includes a glass 83 facing an original, a light source 84 (i.e., ~~{an LED(light-}~~ **[a light]** emitting diode ~~{})}~~ **[or LED]**) for lighting an image surface of an original, a lens array 85 for making an image in focus, and an equal magnification lens 86. A ~~{closely-}~~ **[close-]**contact sensor ~~{that}~~ **[, which]** requires no focusing lens[,], may ~~{is}~~ **[be]** substituted for the image sensor 78.

When an original of a relatively thick book is placed on the second reading mechanism R2, the thick book is pressed by the pressure plate 70 and accordingly[,] the first reading mechanism R1 is lifted up. This leads [to] a separation of the sheet pressure plate 79 away from the contact glass 63. For this reason, the **[automatic document feeder or]** ADF 250 is provided with a sensor (not shown) for detecting ~~{such an event in that}~~ **[when]** the sheet pressure plate 79 is moved away from the contact glass 63. Based on this detection, a use of the first reading mechanism R1 is inhibited.

When an emergency job ~~{including}~~ **[, which includes both]** reading and image forming[,] occurs during a reading process of a sheet original with the first reading mechanism R1, the image forming apparatus of ~~{Fig}~~ **[FIG]. 5** allows an interruption due to such an emergency job even though the sheet original is present on the sheet bed 71 or the ejection tray 82. By the interruption, the second reading mechanism R2 is allowed to perform the reading of an original placed on the contact glass 62. The interruption is entered through the control panel 50 of ~~{Fig}~~ **[FIG]. 6**.

~~{Fig}~~ **[FIG]. 8** shows another image forming apparatus according to ~~{the}~~ **[an]** embodiment of the present invention. As shown in ~~{Fig}~~ **[FIG]. 8**, the image forming apparatus does not have the **[automatic document feeder or]** ADF 250. In accordance with the removal of the **[automatic document feeder or]** ADF 250, the pressure plate 70 is differently configured. Therefore, other than the removal of the **[automatic document feeder or]** ADF 250, the image forming apparatus of ~~{Fig}~~ **[FIG.] 8 [is]** basically ~~{remain}~~ **[the]** same as that of ~~{Fig}~~ **[FIG]. 5**. In the image forming apparatus of ~~{Fig}~~ **[FIG]. 8**, the surface of the original facing the contact glass 62 is read by the second reading mechanism R2 during one scanning process, while both surfaces of the

original can be read with the first and second reading mechanisms R1 and R2 during one transfer process in the image forming apparatus of ~~{Fig}~~ **[FIG]**. 5. When an original is placed on the contact glass 62 in the image forming apparatus of ~~{Fig}~~ **[FIG]**. 5, the surface of the original facing the contact glass 62 is read by the second reading mechanism R2 during one scanning process.

In both image forming apparatuses of ~~{Figs}~~ **[FIGS]**. 5 and 8, the page ~~{order}~~ **[orders]** of the recording sheets P stacked in the stacker 40 and ~~{those}~~ **[the recording sheets P]** stacked in the ejection tray 44 are different, as described above. Accordingly, the image forming apparatuses of ~~{Figs}~~ **[FIGS]**. 5 and 8 are configured to control the page order of the recording sheets P ejected either to the stacker 40 or the ejection tray 44 in a manner as described above when originals are read with either the first reading mechanism R1 or the second reading mechanism R2.

~~{Fig}~~ **[FIG]**. 9 is a table summarizing a relationship between manners of reading originals and manners of recording pages which are achieved by the image forming apparatuses of ~~{Figs}~~ **[FIGS]**. 5 and 8. In the table of ~~{Fig}~~ **[FIG]**. 9, an item I indicates which one of the first reading mechanism R1 and the second reading mechanism R2 is used and an item II indicates whether an original is ~~{of}~~ single-sided, abbreviated as S-S, or double-sided, abbreviated as D-S. Further, an item III indicates an order of page reading, in which a page number[, ] in ~~{bracket}~~ **[brackets,]** indicates a blank page. Further, an item IV indicates which one of the stacker 40 and the ejection tray 44 is used and an item V indicates which one of the single-~~{side}~~ **[sided]** recording **[operation]**, abbreviated as S-S, and the double-~~{side}~~ **[sided]** recording **[operation]**, abbreviated as D-S[, ] is performed. Further, an item VI indicates an order of page

generation and an item VII indicates processes performed. In item VII, a process 1 transfers an image from the photoconductive drum 1 to the intermediate transfer belt 10, a process 2 transfers an image from the photoconductive drum 1 to the recording sheet P, and a process 3 transfers an image from the intermediate transfer belt 10 to the recording sheet P.

In the image forming apparatus of {Fig} [FIG]. 8, a sheet path for ejecting the recording sheet P to the stacker 40 is configured to turn the recording sheet P so that the recording sheet P is ejected to the stacker 40 in a face down manner. This operation is referred to as a reverse ejection. A sheet path for ejecting the recording sheet P to the ejection tray 44 is configured to eject it in a straight **[or forward]** manner so that the recording sheets P are stacked in the ejection tray 44 in a face up manner. This operation is referred to as a straight **[or forward]** ejection. Therefore, in order to eject the recording sheets P in **[increasing]** order of {pages} **[page numbers]**, an order of generating pages is different between the cases of ejection to the stacker 40 and to the ejection tray 44.

{This} [The] apparatus of {Fig} [FIG]. 8 uses a method of {the} double-~~{side}~~ **[sided]** recording in which two pages of images for the first and second surfaces are stored before starting the image forming process and **[both of]** the photoconductive drum 1 and the intermediate transfer belt 10 are effectively involved in the image forming process without being stopped.

In the table of {Fig} [FIG]. 9, the reading manner a and b represent the sheet scanning mode of the image forming apparatus of {Fig} [FIG]. 5 and the reading manner c and d represent the book scanning mode of the image forming apparatuses of

~~{Figs}~~ **[FIGS]**. 5 and 8. In the reading manner b and d, the fourth page is a white page ~~{and}~~ **[as]** so indicated.

The recording manner A and B represent the cases ~~{ejecting}~~ **[where]** the recording sheets P **[are ejected]** to the stacker 40 and the recording manner C and D represent the cases ~~{ejection}~~ **[where]** the recording sheets P **[are ejected]** to the ejection tray 44.

~~{Combination of}~~ **[In combining]** the above~~[-described]~~ reading ~~{manner}~~ **[manners]** and ~~{the}~~ recording ~~{manner makes}~~ **[manners, one can come up with]** sixteen different image reading and recording methods. Amongst the sixteen methods, when single-sided originals are read with the **[automatic document feeder or]** ADF 250 in the sheet scanning mode, the original is read by the **[charge-coupled device or]** CCD 68 under the conditions that the moving members 65 and 66 are stopped at the reading position under the contact glass 63 since the first page of the originals faces up in the sheet bed 71 of the **[automatic document feeder or]** ADF 250. When double-sided originals are read with the **[automatic document feeder or]** ADF 250 in the sheet scanning mode, the even~~[-numbered]~~ page is read by the image sensor 78 and the odd~~[-numbered]~~ page is read by the **[charge-coupled device or]** CCD 68 with the moving members 65 and 66 stopped at the reading position under the contact glass 63. When single-sided or double-sided originals are read sheet~~[-]~~by~~[-]~~sheet in the book scanning mode, the original is read by the **[charge-coupled device or]** CCD 68 moved with the moving members 65 and 66. In this case, the original placed on the contact glass 62 is manually turned.

Next, each of the sixteen methods is explained.

(1) In a method “Aa,” single-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the single-sided recording sheets P are in turn ejected to the stacker 40. The originals are transferred by the **[automatic document feeder or]** ADF 250 sheet[-]by[-]sheet and are read in order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. Each of the formed images is transferred from the photoconductive drum 1 to the recording sheet P (i.e., the process 2) and is ejected to the stacker 40. Thereby, the single-sided recording sheets P are stacked face down in the proper page **[number]** order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

In reading the single-sided originals in increasing order of sheet numbers, the sheet that is first read is not called the first sheet but the sheet that has the first page is called the first sheet, as in the case of the recording process. Likewise, in reading double-sided originals, the sheet that has the first and second pages is called first sheet and the reading is performed in increasing order of ~~{pages}~~ **[page numbers]** and sheet numbers.

Some reading apparatuses are configured to read originals from the last sheet. Accordingly, the last page is first read and the reading is performed in decreasing order of ~~{pages}~~ **[page numbers]**. In these apparatuses, the sheet that is first read may be the first sheet although it has the last page.

(2) In a method “Ab,” double-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the resultant single-sided recording sheets P are in turn ejected to the stacker 40. The originals are transferred by the **[automatic document feeder or]** ADF 250 sheet~~[-]~~by~~[-]~~sheet and are read in order of even~~[-numbered]~~ and odd~~[-numbered]~~ pages, such as 2, 1, 4, 3, and so on. This is because the image sensor 78[, ] that reads even ~~{page locates}~~**[-numbered pages, is located]** upstream and the contact glass 63[, ] that reads odd ~~{page locates}~~**[-numbered pages is located]** downstream. The images are formed on the photoconductive drum 1 in order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. However, the fourth page is detected as a white page by the image sensor 78 and therefore[, ] no image is formed for the fourth page. Each of the formed images is transferred from the photoconductive drum 1 to the recording sheet P (i.e., the process 2) and is ejected to the stacker 40. Thereby, the single-sided recording sheets P are stacked face down in the proper page order.

Thus, the double-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(3) In a method “Ac,” single-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the resultant single-sided recording sheets P are in turn ejected to the stacker 40. The single-sided originals are placed on the contact glass 62 sheet~~[-]~~by~~[-]~~sheet in a desired order, or in an increasing order of ~~{pages}~~ **[page**



**numbers]** such as 1, 2, 3, 4, and so on, for example, by the user. The originals are then read with the second reading mechanism R2 in order of placements by the user, i.e., in increasing order of ~~{pages}~~ **[page numbers]** such as 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in **[increasing]** order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. Each of the formed images is transferred from the photoconductive drum 1 to the recording sheet P (i.e., the process 2) and is ejected to the stacker 40. Thereby, the single-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(4) In a method “Ad,” double-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the resultant single-sided recording sheets P are in turn ejected to the stacker 40. The double-sided originals are placed on the contact glass 62 sheet~~[-]~~by~~[-]~~sheet in increasing order of page **[numbers,]** such as 1, 2, 3, 4, and so on, for example, by the user. The originals are then read with the second reading mechanism R2 in order of ~~{placements}~~ **[placement]** by the user, i.e., in increasing order of ~~{pages}~~ **[page numbers,]** such as 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. However, since the fourth page is a white page, the user does not let it **[be]** read and therefore~~[,]~~ no image is formed for the fourth page. Each of the formed images is transferred from the photoconductive drum 1 to the recording sheet P (i.e., the process 2)

and is ejected to the stacker 40. Thereby, the single-sided recording sheets P are stacked face down in the proper page order.

Thus, the double-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(5) In a method “Ba,” single-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ **[sided]** recording mode, and the double-sided recording sheets P are in turn ejected to the stacker 40. The single-sided originals are transferred by the **[automatic document feeder or]** ADF 250 sheet~~[-]~~by~~[-]~~sheet and are read in order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in order of even~~[-]~~**[-numbered]** and odd~~[-]~~**[-numbered]** pages, such as 2, 1, 4, 3, and so on. The double-~~{side}~~ **[sided]** recording process is as follows. An image of the even~~[-]~~**[-numbered]** page is transferred from the photoconductive drum 1 to the intermediate transfer belt 10 (i.e., the process 1). An image of the odd~~[-]~~**[-numbered]** page is transferred from the photoconductive drum 1 to the second surface of the recording sheet P (i.e., the process 2). The image of the even~~[-]~~**[-numbered]** page is transferred from the intermediate transfer belt 10 to the first surface of the recording sheet P (i.e., the process 3). Then, the double-sided recording sheet P is ejected to the stacker 40. The processes 1 – 3 are repeated. Thereby, the double-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(6) In a method “Bb,” double-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ **[sided]** recording mode, and the double-sided recording sheets P are in turn ejected to the stacker 40. The double-sided originals are transferred by the **[automatic document feeder or]** ADF 250 sheet[-]by[-]sheet and are read in order of even~~[-numbered]~~ and odd~~[-numbered]~~ pages[,], such as 2, 1, 4, 3, and so on. The images are formed on the photoconductive drum 1 in **[a patterned]** order of ~~{pages as}~~ **[page numbers]** being read, such as 2, 1, 4, 3, and so on, in the double-~~{side}~~ **[sided]** recording mode (i.e., the processes 1 – 3). Then, the double-sided recording sheet P is ejected to the stacker 40. In the above procedure, however, the fourth page is a white page which is detected by the image sensor 78. In this case, no image is formed the fourth page and the image of the third page is generated through the process 2. Thereby, the double-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(7) In a method “Bc,” single-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ **[sided]** recording mode, and the double-sided recording sheets P are in turn ejected to the stacker 40. The single-sided originals are placed on the contact glass

62 sheet[-]by[-]sheet in a desired order, or in an increasing order of pages, by the user. The originals are then read with the second reading mechanism R2 in order of ~~{placements}~~ **[placement]** by the user, i.e., in increasing order of ~~{pages}~~ **[page numbers,]** such as 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in ~~{order}~~ **[a pattern]** of even[-**numbered**] and odd[-**numbered**] pages, such as 2, 1, 4, 3, and so on, in the double-~~{side}~~ **[sided]** recording mode (i.e., the processes 1 – 3). Then, the double-sided recording sheet P is ejected to the stacker 40. The processes 1 – 3 are repeated for each cycle of the double-~~{side}~~ **[sided]** recording mode. Thereby, the double-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(8) In a method “Bd,” double-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ **[sided]** recording mode, and the double-sided recording sheets P are in turn ejected to the stacker 40. The double-sided originals are placed on the contact glass 62 sheet[-]by[-]sheet in a desired order, or in an increasing order of pages from the first page, for example, by the user. The originals are then read with the second reading mechanism R2 in order of ~~{placements}~~ **[placement]** by the user, i.e., in increasing order of ~~{pages}~~ **[page numbers,]** such as 1, 2, 3, 4, and so on. The fourth page, however, is a white page and the user would normally not let it **[be]** read. Therefore, after the placement of the third page on the contact glass 62, the user can instruct a start of the recording ~~{through}~~ **[via]** the control panel 50. The images are formed on the

photoconductive drum 1 in ~~{order}~~ **[a pattern]** of even~~[-numbered]~~ and odd~~[-numbered]~~ pages[,], such as 2 and 1 in the double-~~{side}~~ **[sided]** recording mode ~~{through}~~ **[via]** the processes 1 – 3 and the image of the third page is generated ~~{through}~~ **[via]** the process 2. Then, the double-sided recording ~~{sheet}~~ **[sheets]** P are in turn ejected to the stacker 40. Thereby, the double-sided recording sheets P are stacked face down in the proper page order. As described above, even when the last page is a white page, the user can simply start the recording by, for example, pressing a start button on the control panel 50 so as to obtain the proper double-sided output including the last page.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(9) In a method “Ca,” single-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the single-sided recording sheets P are in turn ejected to the ejection tray 44. The single-sided originals are transferred by the **[automatic document feeder or]** ADF 250 sheet~~[-]~~by~~[-]~~sheet and are read in order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in order of ~~{pages-as}~~ **[page numbers]** being read, such as 1, 2, 3, 4, and so on. Each formed image is recorded on the first surface of the recording sheet P ~~{through}~~ **[via]** the processes 1 and 3. More specifically, the image is transferred from the photoconductive drum 1 to the intermediate transfer belt 10 (i.e., the process 1) and is further transferred from the intermediate transfer belt 10 to the recording sheet P (i.e.,

the process 3). Then, the double-sided recording sheet P is ejected straight to the ejection tray 44. Thereby, the single-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(10) In a method "Cb," double-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the resultant single-sided recording sheets P are in turn ejected to the ejection tray 44. The originals are transferred by the **[automatic document feeder or]** ADF 250 sheet~~[-]~~by~~[-]~~sheet and are read in ~~{order}~~ **[a pattern]** of even~~[-]~~**[-numbered]** and odd~~[-]~~**[-numbered]** pages, such as 2, 1, 4, 3, and so on. The images are formed on the photoconductive drum 1 in order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. However, the fourth page is detected as a white page by the image sensor 78 and therefore[, ] no image is formed for the fourth page. Each of the formed images is transferred from the photoconductive drum 1 to the intermediate transfer belt 10 (i.e., the process 1) and then from the intermediate transfer belt 10 to the first surface of the recording sheet P (i.e., the process 3). The recording sheet P having the image on the lower surface thereof is ejected to the ejection tray 44. Thereby, the single-sided recording sheets P are stacked face down in the proper page order.

Thus, the double-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(11) In a method “Cc,” single-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the resultant single-sided recording sheets P are in turn ejected to the ejection tray 44. The single-sided originals are placed by the user on the contact glass 62 sheet[-]by[-]sheet in a desired order, or in an increasing order of ~~{pages}~~ **[page numbers,]** such as 1, 2, 3, 4, and so on, for example. The originals are then read with the second reading mechanism R2 in order of ~~{placements}~~ **[placement]** by the user, i.e., in increasing order of ~~{pages}~~ **[page numbers,]** such as 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in **[increasing]** order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. Each of the formed images is transferred eventually to the lower surface of the recording sheet P via the processes 1 and 3, and is ejected to the ejection tray 44. Thereby, the single-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(12) In a method “Cd,” double-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the single-~~{side}~~ **[sided]** recording mode, and the resultant single-sided recording sheets P are in turn ejected to the ejection tray 44. The double-sided originals are placed by the user on the contact glass 62 sheet[-]by[-]sheet in increasing order of page **[numbers,]** such as 1, 2, 3, 4, and so on, for example. The originals are then read with the second reading mechanism R2 in order of ~~{placements}~~ **[placement]** by the user, i.e., in

increasing order of ~~{pages}~~ **[page numbers,]** such as 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in **[increasing]** order of ~~{pages}~~ **[page numbers]** 1, 2, 3, 4, and so on. However, since the fourth page is a white page, the user does not let it **[be]** read and therefore[,] no image is formed for the fourth page. Each of the formed images is transferred from the photoconductive drum 1 eventually to the lower surface of the recording sheet P ~~{through}~~ **[via]** the processes 1 and 3, and is ejected to the ejection tray 44. Thereby, the single-sided recording sheets P are stacked face down in the proper page order.

Thus, the double-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant single-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(13) In a method “Da,” single-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ **[sided]** recording mode, and the double-sided recording sheets P are in turn ejected to the ejection tray 44. The single-sided originals are transferred by the **[automatic document feeder or]** ADF 250 sheet[-]by[-]sheet and are read in ~~{order of pages 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in order of pages as being read such as 1, 2, 3, 4, and so on. }~~ **[increasing order of page numbers 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in increasing order of page numbers being read, such as 1, 2, 3, 4, and so on.]** In this case, the single-~~{side}~~ **[sided]** recording **[operation]** performs the processes 1 – 3 so that an image of the odd**[-numbered]** page is transferred to from the photoconductive drum 1 via the intermediate transfer belt 10 to the lower surface of the recording sheet P



(i.e., the process 1 and 2) and an image of the even[-numbered] page is transferred from the photoconductive drum 1 to the upper surface of the recording sheet P (i.e., the process 3). Then, the double-sided recording sheet P is ejected to the ejection tray 44. The processes 1 – 3 are repeated. Thereby, the double-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(14) In a method “Db,” double-sided originals are read with the first reading mechanism R1, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ [sided] recording mode, and the double-sided recording sheets P are in turn ejected to the ejection tray 44. The double-sided originals are transferred by the [automatic document feeder or] ADF 250 sheet[-]by[-]sheet and are read in ~~{order}~~ [a pattern] of even[-numbered] and odd[-numbered] pages[,], such as 2, 1, 4, 3, and so on. The images are formed on the photoconductive drum 1 in [increasing] order of ~~{pages}~~ [page numbers,] such as 1, 2, 3, 4, and so on[,], in the double-~~{side}~~ [sided] recording mode (i.e., the processes 1 – 3). Then, the double-sided recording sheet P is ejected to the ejection tray 44. In the above procedure, however, the fourth page is a white page which is detected by the image sensor 78. In this case, no image is formed the fourth page and the image of the third page is generated on the lower surface of the recording sheet P ~~{through}~~ [via] the processes 1 and 3. Thereby, the double-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(15) In a method “Dc,” single-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ **[sided]** recording mode, and the double-sided recording sheets P are in turn ejected to the ejection tray 44. The single-sided originals are placed on the contact glass 62 sheet[-]by[-]sheet in a desired order, or in an increasing order of ~~{pages}~~ **[page numbers]**, by the user. The originals are then read with the second reading mechanism R2 in order of ~~{placements}~~ **[placement]** by the user, i.e., in increasing order of ~~{pages}~~ **[page numbers]**, such as 1, 2, 3, 4, and so on. The images are formed on the photoconductive drum 1 in **[increasing]** order of ~~{pages as}~~ **[page numbers]** being read[,], such as 1, 2, 3, 4, and so on[,], in the double-~~{side}~~ **[sided]** recording mode (i.e., the processes 1 – 3). Then, the double-sided recording sheet P is ejected to the ejection tray 44. The processes 1 – 3 are repeated for each cycle of the double-~~{side}~~ **[sided]** recording mode. Thereby, the double-sided recording sheets P are stacked face down in the proper page order.

Thus, the single-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

(16) In a method “Dd,” double-sided originals are read with the second reading mechanism R2, the read images are in turn reproduced on the recording sheets P in the double-~~{side}~~ **[sided]** recording mode, and the double-sided recording sheets P are in

turn ejected to the ejection tray 44. The double-sided originals are placed on the contact glass 62 sheet[-]by[-]sheet in a desired order, or in an increasing order of ~~{pages}~~ **[page numbers]** from the first page, for example, by the user. The originals are then read with the second reading mechanism R2 in order of ~~{placements}~~ **[placement]** by the user, i.e., in increasing order of ~~{pages}~~ **[page numbers,]** such as 1, 2, 3, 4, and so on. The fourth page, however, is a white page and the user would normally not let it **[be]** read. Therefore, after the placement of the third page on the contact glass 62, the user can instruct a start of the recording ~~{through}~~ **[via]** the control panel 50. The images are formed on the photoconductive drum 1 in **[increasing]** order of ~~{pages}~~ **[page numbers]** 1 and 2 in the double-~~{side}~~ **[sided]** recording mode (i.e., the processes 1 – 3) and the image of the third page is generated through in the single-~~{side}~~ **[sided]** recording mode (i.e., the processes 1 and 3). Then, the double-sided recording ~~{sheet}~~ **[sheetd]** P are in turn ejected to the ejection tray 44. Thereby, the double-sided recording sheets P are stacked face down in the proper page order. As described above, even when the last page is a white page, the user can simply start the recording by, for example, pressing the start button on the control panel 50 so as to obtain the proper double-sided output including the last page.

Thus, the double-sided originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant double-sided recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

In the above description, the operation for handling four pages of originals is exemplified. However, it is noted that the image forming apparatus of ~~{Fig}~~ **[FIG]. 5**

can handle any number of pages of originals in accordance with the table of ~~{Fig}~~ **[FIG]. 9** so as to output the recorded sheets in the proper page order.

As described above, in any one of the sixteen cases, the originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

Therefore, in both double-~~{side}~~ **[sided]** and single-~~{side}~~ **[sided]** recording modes, the user can easily check the contents of the recorded images. In addition, the user can easily restart the reproduction operation when a disturbance is caused due to a paper jam.

Further, since the image forming apparatus of ~~{Fig}~~ **[FIG]. 5** reads the originals from the first sheet and outputs from the first sheet, it can perform the image forming operation in ~~{a}~~ **[an amount of]** time faster than the apparatus that reads the originals from the last sheet and outputs from the first sheet.

Further, since the image forming apparatus of ~~{Fig}~~ **[FIG]. 5** reads the originals from the first sheet and outputs from the first sheet, two pages of images ~~{are needed}~~ **[need]** to be stored. This is far ~~{small}~~ **[smaller than]** in comparison to the case ~~{of}~~ **[where]** an apparatus ~~{that}~~ reads the originals from the last sheet and outputs from the first sheet.

In the image forming apparatus of ~~{Fig}~~ **[FIG]. 5**, temperature of the fixing rollers 18 and 19 can be controlled. This feature may be applied also to other embodiments of the present invention. By ~~{a control of}~~ **[controlling the]** temperature of the fixing rollers 18 and 19, the fixing process can be performed in an ~~{optical}~~ **[optimal]** condition in accordance with ~~{the}~~ **[whatever]** mode of image forming ~~{such}~~

as the ~~single-side or double-side recording and~~ [is chosen, i.e., **single-sided recording mode or double-sided recording mode, and whatever**] the type of recording sheet used ~~{such as a}~~ [, i.e.,] thick **[recording sheet]** or thin recording sheet. For example, the double-~~{side}~~ **[sided]** recording **[mode]** requires an amount of fixing energy greater than the single-~~{side}~~ **[sided]** recording **[mode]**. Therefore, input voltages to the fixing rollers 18 and 19 may be increased or may be applied in a more frequent manner. In addition, in the single-~~{side}~~ **[sided]** recording mode, the temperature of the fixing roller[, ] at a side of the recording sheet having no image[, ] may be controlled to be reduced or the input voltage to it may be turned off.

In the image forming apparatus of ~~{Fig}~~ **[FIG]. 5**, the toner image transferred onto the intermediate transfer belt 10 needs to be prevented from melting due to the high temperature of the fixing rollers. To achieve this, an application of ~~{temperature}~~ **[heat]** to the fixing rollers 18 and 19 is stopped or controlled during the process ~~{for transferring}~~ **[while]** the toner ~~{image}~~ **[images are transferred]** from the photoconductive drum 1 to the intermediate transfer belt 10. As a result, the toner image on the intermediate transfer belt 10 is prevented from melting due to the high temperature of the fixing rollers.

In the image forming apparatus of ~~{Fig}~~ **[FIG]. 5**, the intermediate transfer belt 10 is closely contacted by the fixing rollers 18 and 19, which may adversely affect the toner image on the intermediate transfer belt 10. To avoid this ~~{happens}~~ **[from happening]**, the cooling rollers 16 are arranged to cool down the intermediate transfer belt 10.

~~{Fig}~~ **[FIG]**. 10 shows an image forming system **[which]** includes the image forming apparatus of ~~{Fig}~~ **[FIG.]** 5 ~~{added with}~~ **[and]** additional apparatuses. As shown in ~~{Fig}~~ **[FIG]**. 10, the image forming system includes sheet banks PT1 and PT2 and additional ejection apparatuses EXT1 and EXT2. The sheet banks PT1 and PT2 are arranged under the sheet cassette 26. The ejection apparatus EXT1 is arranged at a side of the **[automatic document feeder or]** ADF 250 and over the manual sheet inlet 35 and the ejection apparatus EXT2 is arranged at another side of the **[automatic document feeder or]** ADF 250 and over the ejection tray 44. Each of the ejection apparatuses EXT1 and EXT2 includes a plurality of bins **[which]** each ~~{for receiving}~~ **[receive]** the ejected recording sheets P. Each of the ejection apparatuses EXT1 and EXT2 may be a sorter for grouping recording sheets by sorting the recording sheets in **[increasing]** page **[number]** order or a collator for grouping recording sheets by collating the recording sheets with the same page number. It is also possible to install a stapling machine for stapling each stack of sheets sorted by the sorter or collated by the collator.

An additional sheet path Q1 is provided in the sheet ejection space above the stacker 40 to guide the recording sheet P sent from the ejection rollers 34 to the ejection apparatus EXT1. A switching pawl 41 is provided ~~{to}~~ **[on]** an edge portion of the sheet path Q1 close to the ejection rollers 34 to switch ~~{ways to guide}~~ **[paths for guiding]** the recording sheet P to **[either]** the stacker 40 or to the ejection apparatus EXT1. The sheet path Q1 is arranged at the uppermost position of the ejection space over the stacker 40 such that the stacker 40 can be used without being disturbed by the sheet path Q1.

An additional sheet path Q2 is arranged to guide the recording sheet P[,] ejected from the ejection rollers 32[,] to the ejection apparatus EXT2. A switching pawl is

provided at an edge portion of the sheet path Q2 close to the ejection rollers 32 so as to switch ~~{ways to guide}~~ **[paths for guiding]** the recording sheet P to **[either]** the ejection tray 44 or to the ejection apparatus EXT2.

When the recording sheet P is ejected to the ejection apparatus EXT1, it is reversed and is ejected in the same orientation as in the case of the ejection to the stacker 40. Therefore, the rules of the sheet handling[,], shown in the table of ~~{Fig.}~~ **[FIG.] 9[,]** can be applied to the case of handling the recording sheet P using the ejection apparatus EXT1.

When the recording sheet P is ejected to the ejection apparatus EXT2, it is not reversed and is ejected in the same orientation as in the case of the ejection to the ejection tray 44. Therefore, the rules of the sheet handling[,], shown in the table of ~~{Fig.}~~ **[FIG.] 9[,]** can be applied to the case of handling the recording sheet P using the ejection apparatus EXT1.

~~{As an alternative system}~~ **[Alternatively]**, it is possible to configure a system ~~{of}~~ **[having]** the printer 100[,], of ~~{Fig.}~~ **[FIG.] 2[,]** with **[the]** addition of the ejection apparatuses EXT1 and EXT2, although the printer 100 has no scanning machine.

Next, another image forming apparatus[,], according to ~~{the}~~ **[an]** embodiment of the present invention[,], is explained with reference to ~~{Fig.}~~ **[FIG.] 11**. The image forming apparatus[,], of ~~{Fig.}~~ **[FIG.] 11[,]** includes a printer 100C, ~~{the}~~ **[a]** scanner 200B, **[and]** an ~~{ADF (}automatic document feeder {)}~~ **[or ADF] 250B**. The printer 100C is similar to the printer 100 of ~~{Fig.}~~ **[FIG.] 2**, except for **[having]** a fixing unit 30B[,], which is arranged outside of the intermediate transfer belt 10. The scanner 200B is similar to ~~{that}~~ **[the scanner 200]** of ~~{Fig.}~~ **[FIG.] 5**, except for a contact glass 62b

which is substituted for the contact glasses 62 and 63. The **[automatic document feeder or]** ADF 250B is configured to circulate originals.

In the image forming apparatus of ~~{Fig}~~ **[FIG]**. 11, the recording sheet P[,]  
having the transferred toner image thereon[,]  
is transferred to the fixing unit 30B and is  
subjected to the fixing process ~~{thereby}~~[,]  
after being separated from the intermediate  
transfer belt 10. ~~{Although}~~ **[Since]** the fixing unit 30B is **[not]** arranged ~~{not}~~ inside  
**[of,]** but **[rather]** outside **[of]** the intermediate transfer belt 10, it is necessary that the  
fixing unit 30B ~~{is}~~ **[be]** close to the intermediate transfer belt 10 so as to prevent the  
recording sheet P from becoming bent ~~{under the condition of which}~~ **[so that]** the  
unfixed toner image ~~{may be}~~ **[is not]** disturbed. This is possible since the intermediate  
transfer belt 10 has a property of heat resistance. This arrangement eliminates necessity  
of a conveyor having star-like wheels between the intermediate transfer belt 10 and the  
fixing unit 30B.

In addition, the cleaning unit 25 of the printer 100C is configured to clean the  
intermediate transfer belt 10 directly with the cleaning blade 25b.

The **[automatic document feeder or]** ADF 250B is provided with the sheet  
bed 71, the moving plate 72[,]  
and the sheet transfer mechanism 73 ~~{having}~~[, **which**  
**includes all of]** the transfer roller 74, the separation rollers 75, and transfer rollers 76, as  
in the case of ~~{Fig. 5.}~~ **[the automatic document feeder or ADF 250 of FIG. 5.]**

~~{The ADF 250}~~ **[The automatic document feeder or ADF 250B]** includes a  
transfer belt 90, a driving roller 91, a following roller 92, and a plurality of pressing  
rollers 93. The transfer belt 90 is arranged at a lower part of the **[automatic document**  
**feeder or]** ADF 250B and ~~{is extended}~~ **[extends,]** under pressure[,]  
between the



driving roller 91 and the following roller 92 so as to be rotated therebetween. The positions of the driving roller 91 and the following roller 92 can be exchanged ~~{to}~~ [with] each other. The pressing ~~{roller}~~ [rollers] 93 are arranged inside the transfer belt 90 such that the transfer belt 90 applies a slight pressure to the contact glass 62b[,], when the [automatic document feeder or] ADF 250B is in a closed state[,], to read originals.

The [A\automatic document feeder or] ADF 250B further includes a turn roller 94, a following roller 95, a switching pawl 96, a supporting shaft 97, a guide member 98, an ejection tray 99, a pair of ejection rollers 101, a guide member 102, and a cover 103. The turn roller 94 is arranged to the right side of the transfer belt 90 and in contact with the following roller 95 under pressure. The switching pawl 96 is arranged between the turn roller 94 and the ejection rollers 101 and is pivoted about the supporting shaft 97 by an actuator [(not shown),] such as a solenoid~~{(not shown)}~~, for example. The guide member 98 is arranged between the turn roller 94 and the transfer belt 90.

In the [automatic document feeder or] ADF 250B ~~{structured in}~~ [having] the ~~{way as}~~ [above-]described ~~{above}~~ [structure], an original is transferred to the contact glass 62b and is stopped thereon. Then, the original is read by the scanner ~~{200 in the way}~~ [200B in a manner similar to the scanner 200] as described earlier with reference to ~~{Fig}~~ [FIG]. 5. When the original is double-sided, the original is turned after one side is read so that the other side ~~{is}~~ [can be] read.

An original can be placed on the contact glass 62c manually by the user by opening the [automatic document feeder or] ADF 250B.

A stack of the sheet-formed originals S are placed on the moving plate 72 with the first page positioned uppermost and the leading edge thereof ~~{is}~~ pressed against the transfer roller 74 with a pressure member (not shown). The transfer roller 74 is rotated clockwise, as shown in ~~{Fig}~~ **[FIG]. 11**, and consequently[,] the first sheet on the top of the stack is fed to a nip portion of the separation rollers 75. Thereby, the stack of the **[sheet-formed]** originals **[S]** are transferred sheet[-]by[-]sheet. The **[sheet-formed]** original **[S]** is further transferred to a nip portion between the transfer belt 90 and the contact glass 62b via the transfer rollers 76. A cover of the sheet transfer mechanism 73 is configured to open so that the user is allowed to access an inside sheet path to remove **[a]** paper jam.

The transfer belt 90 can be movable in directions indicated by arrows C1 and C2. When the transfer belt 90 is moved in the direction C1, the **[sheet-formed]** original **[S]** is transferred in the forward direction. The transfer belt 90 is stopped in a predetermined time so as to locate the **[sheet-formed]** original **[S]** at a predetermined reading position on the contact glass 62b. Then, the first page of the **[sheet-formed]** original **[S]** is scanned with the light source 64 ~~{(Fig)}~~**[(as discussed above with respect to FIG]. 5)** and the moving members 65 and 66 ~~{(Fig)}~~**[(as discussed above with respect to FIG]. 5)**. After that, the transfer belt 90 is moved in the direction ~~{C}~~ **[C2]** to further transfer the **[sheet-formed]** original **[S]** to the turn roller 94.

The **[sheet-formed]** original **[S]** is transferred into the nip between the turn roller 94 and the following roller 95 and is turned along the guide member 102 and the switching pawl 96[,] which ~~{is}~~ **[was]** switched to an upper position indicated by ~~{an upward arrow. Then, the original }~~**[the upwardly-directed arrow of the double-sided**

**pivot arrow associated with switching pawl 96 as shown in FIG. 11. Then, the sheet-formed original S]** is guided under the transfer belt 90 by the guide member 98. At this time, the transfer belt 90 is moved in the direction C2 for a predetermined time period so as to transfer the **[sheet-formed]** original [S] to the predetermined reading position. Then, the second page of the **[sheet-formed]** original [S] is read in the same manner as the first page is read. After a completion of reading the second page, the transfer belt 90 is moved in the direction C1 to transfer the original in the forward direction. The switching pawl 96 is switched to a lower position ~~{indicated by a downward arrow so that the original is guided in a direction }~~**[, indicated by the downwardly-directed arrow of the double-sided pivot arrow associated with switching pawl 96 as shown in FIG. 11, so that the sheet-formed original S is guided in the direction of arrow] B** to ejection rollers 101. Thereby, the **[sheet-formed]** original [S] is ejected to an ejection tray 99 and is stacked face down in the ejection tray 99. That is, the first page faces down and the stack of **[the sheet-formed]** originals [S] are held in increasing order of ~~{pages}~~ **[page numbers]** in the ejection tray 99.

The guide member 102 is formed ~~{in}~~ **[to have]** a plurality of ribs such that the **[sheet-formed]** original [S] is transferred with a relatively small area contacting the guide member 102. The guide member 102 is a part of the cover and is configured to be opened so that the user can easily access an internal sheet path to remove paper jam.

It is preferable that the user accesses the image forming apparatus of ~~{Fig}~~ **[FIG]. 11** at a position in front of it and in a direction perpendicular to ~~{the figure of Fig. 11;}~~ **[FIG. 11 by]** placing a stack of **[sheet-formed]** originals S on the sheet bed 71,

removing a stack of read **[sheet-formed]** originals S from the ejection tray 99, removing the recorded sheets P from the stacker 40, etc.

The image forming apparatus of ~~{Fig. 11 structured as described above is applied with the rules of the}~~ **[FIG. 11, having the above-described structure, works according to the rules of ]**sheet handling shown in the table of ~~{Fig}~~ **[FIG]. 9**. That is, the **[sheet-formed]** originals **[S]** are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

Therefore, in both double-~~{side}~~ **[sided]** and single-~~{side}~~ **[sided]** recording modes, the user can easily check the contents of the recorded images. In addition, the user can easily restart the reproduction operation when a disturbance is caused due to a paper jam.

Further, since the image forming apparatus of ~~{Fig}~~ **[FIG]. 11** reads the originals from the first sheet and outputs from the first sheet, it can perform the image forming operation in a time faster than the apparatus that reads the originals from the last sheet and outputs from the first sheet.

Further, since the image forming apparatus of ~~{Fig}~~ **[FIG]. 11** reads the originals from the first sheet and outputs from the first sheet, two pages of images ~~{are needed to}~~ **[must]** be stored. This is ~~{far small}~~ **[a far smaller amount that needs to be stored]** in comparison to the case of an apparatus that reads the originals from the last sheet and outputs from the first sheet.

Next, a color image forming apparatus[, ] according to ~~{the}~~ **[an]** embodiment of the present invention[, ] is explained with reference to ~~{Fig}~~ **[FIG]. 12**. The image

forming apparatus[,] of ~~{Fig.}~~ **[FIG.]** 12[,] includes the color printer 100B[,] of ~~{Fig.}~~ **[FIG.]** 4, **[and both]** the scanner 200 ~~{of Fig. 5,}~~ and the **[automatic document feeder or]** ADF 250[,] of ~~{Fig.}~~ **[FIG.]** 5. The color image forming apparatus[,] of ~~{Fig.}~~ **[FIG.]** 12[,] is provided with a multi-function controller (not shown) for performing multi-functions as a copying machine, a facsimile machine, and a printer.

The color image forming apparatus[,] of ~~{Fig.}~~ **[FIG.]** 12[,] basically performs the operations in the same manner as the image forming apparatus of ~~{Fig.}~~ **[FIG.]** 5 does, except for the following. That is, in the color image forming apparatus of ~~{Fig.}~~ **[FIG.]** 12, the intermediate transfer belt 10 is separated away from the photoconductive drum 1 and is stopped on standby after the toner image for the first page is transferred to the intermediate transfer belt 10 when a double-sided original is read. During standby, the toner image for the second page is formed on the photoconductive drum 1. On the other hand, in the image forming apparatus of ~~{Fig.}~~ **[FIG.]** 5, neither the photoconductive drum 1 nor the intermediate transfer belt 10 is stopped during the image forming process. This is the difference between the color image forming apparatus of ~~{Fig.}~~ **[FIG.]** 12 and the image forming apparatus of ~~{Fig.}~~ **[FIG.]** 5.

The first and second reading mechanisms R1 and R2 **[is]** configured as color scanners for reading color image information of an original in each ~~{separation}~~ **[separate]** color of red (R), green (G), and blue (B) and ~~{convert}~~ **[converting]** the read information into electrical signals. A color image sensor of each reading mechanism **[R1 and R2]** includes R, G, and B separators and photoelectric devices to simultaneously read three color images separated in R, G, and B and ~~{generates}~~ **[to generate]** R, G, and B image signals in parallel. Then, an image processing unit (not

shown) performs a color conversion to generate color image data of black (Bk), cyan (C), magenta (M), and ~~{Yellow}~~ **[yellow]** (Y) colors in accordance with intensity of the R, G, and B image signals.

The first and second reading mechanisms R1 and R2 perform color scanning operations in the following manner. The first and second reading mechanisms R1 and R2 start scanning on the original upon receiving a scan start signal sent in synchronism with the operations of the color printer 100B, and **[then]** output image data in each of the four colors **[black (Bk), cyan (C), magenta (M), and yellow (Y)]**. The color printer 100B in turn performs the image forming processes for the four color toner images and overlays them ~~{one to another}~~ **[on top of each other]** so as to generate a full color toner image. The color image forming apparatus of ~~{Fig}~~ **[FIG]**. 12 is configured to read the image data in each of the four colors during one scanning process so as to be able to capture color image data from the first and second surfaces of a double-sided original during a time of transferring that original.

The color image forming apparatus of ~~{Fig}~~ **[FIG.]** 12[, ] structured as described above ~~{is applied with}~~ **[, works according to]** the rules of ~~{the}~~ sheet handling shown in the table of ~~{Fig}~~ **[FIG]**. 9. That is, the originals are read in increasing order of sheet numbers 1, 2, 3, and so on, and the resultant recording sheets P are output in increasing order of sheet numbers 1, 2, 3, and so on.

Therefore, in both double-~~{side}~~ **[sided]** and single-~~{side}~~ **[sided]** recording modes, the user can easily check the contents of the recorded images. In addition, the user can easily restart the reproduction operation when a disturbance is caused due to a paper jam.

Further, since the color image forming apparatus of ~~{Fig}~~ **[FIG]. 12** reads the originals from the first sheet and outputs from the first sheet, it can perform the image forming operation in a time faster than the apparatus that reads the originals from the last sheet and outputs from the first sheet.

Further, since the color image forming apparatus of ~~{Fig}~~ **[FIG]. 12** reads the originals from the first sheet and outputs from the first sheet, two pages of images ~~{are needed}~~ **[need]** to be stored. This is ~~{far small}~~ **[a far smaller amount that needs to be stored than]** in comparison to the case of an apparatus that reads the originals from the last sheet and outputs from the first sheet.

In the above-described printer 100 of ~~{Fig}~~ **[FIG]. 2** and the color printer 100B of ~~{Fig}~~ **[FIG]. 5**, the intermediate transfer belt 10 may be ~~{reverse}~~ **[reversely]**-turned to a predetermined position after the first toner image is transferred onto the intermediate transfer belt 10, instead of being moved for one turn in the forward direction. In this case, the photoconductive drum 1 and the intermediate transfer belt 10 ~~{is}~~ **[are]** configured to be able to contact ~~{with}~~ **[each other]** and separate from each other.

In addition, the printer 100 and the color printer 100B may employ a belt-shaped photoconductive member in place of the photoconductive drum 1.

Numerous additional modifications and variations of the present ~~{application}~~ **[invention]** are possible in light of the above teachings. It is therefore to be understood that within the scope of the appended claims, the present application may be practiced otherwise than as specifically described herein.

{This application claims priority to Japanese patent applications, No. JPAP2000-231576 filed on July 31, 2000, No. 2000-231575 filed on July 31, 2000, and No. JPAP2001-185475 filed on June 19, 2001 in the Japanese Patent Office, the entire contents of which are hereby incorporated by reference.

**WHAT IS CLAIMED IS:**

1. ~~An image forming apparatus, comprising:  
a first image carrying member configured to carry images in increasing order of corresponding sheet numbers;  
a second image carrying member configured to carry an image transferred from said first image carrying member;  
a plurality of ejection trays including a first ejection tray configured to stack a plurality of output sheets in a straight orientation and a second ejection tray configured to stack a plurality of output sheets in a reversed orientation; and  
a sheet transferring mechanism configured to transfer a recording sheet to a nip formed between said first and second image carrying members,  
wherein said first image carrying member is caused to transfer an image to one surface of said recording sheet and, at the same time, said second image carrying member is caused to transfer another image to another surface of said recording sheet in response to a selection between said first and second ejection trays in a double-side recording mode so that said first and second ejection trays stack said plurality of recording sheets in increasing order of pages.~~
2. ~~An image forming apparatus as defined in Claim 1, further comprising a mode selecting mechanism configured to select one of a single-side recording mode and said double-side recording mode.~~
3. ~~An image forming apparatus as defined in Claim 1, further comprising a tray selecting mechanism configured to select one of said first and second ejection trays.~~
4. ~~An image forming apparatus as defined in Claim 1, further comprising a sheet selecting mechanism configured to select a type of sheet, and wherein one of said first and second ejection trays is selected in accordance with a selection made by said sheet selecting mechanism.~~
5. ~~An image forming apparatus as defined in Claim 1, further comprising a plurality of sheet supplying mechanism each configured to supply the recording sheets to said sheet transferring mechanism.~~
6. ~~An image forming apparatus as defined in Claim 5, further comprising a cassette selecting mechanism configured to select one of said plurality of sheet supplying mechanism.~~
7. ~~An image forming apparatus as defined in Claim 5, further comprising a sheet selecting mechanism configured to select a type of sheet, and wherein one of said plurality of sheet~~



supplying mechanism is selected in accordance with a selection made by said sheet selecting mechanism.

8. An image forming apparatus as defined in Claim 1, further comprising an extra sheet supplying mechanism configured to insert a recording sheet in an approximately straight orientation, and wherein a recording sheet is transferred from said extra sheet supplying mechanism to said first ejection tray via said sheet transferring mechanism.

9. An image forming apparatus as defined in Claim 8, further comprising a sheet selecting mechanism configured to select a type of sheet, and wherein said extra sheet supplying mechanism and said first ejection tray are selected when said sheet selecting mechanism selects a thick sheet.

10. An image forming apparatus as defined in Claim 8, wherein said extra sheet supplying mechanism includes a manual sheet insertion tray.

11. An image forming apparatus as defined in Claim 10, further comprising a sensor for detecting an event in that said manual sheet insertion tray is accessed by a user, and wherein said extra sheet supplying mechanism and said first ejection tray are selected when said sensor detects said event.

12. An image forming apparatus as defined in Claim 1, wherein said first image carrying member is caused to transfer an image of odd page to an upper surface of said recording sheet and, at the same time, said second ejection tray is caused to transfer an image of even page on a lower surface of said recording sheet when said second ejection tray is selected in a double-side recording mode so that said second ejection tray stacks a plurality of said recording sheets in increasing order of pages.

13. An image forming apparatus as defined in Claim 3, wherein said first image carrying member is caused to transfer an image to on one surface of said recording sheet and said second image carrying member is caused to transfer another image on another surface of said recording sheet in response to a selection made by said tray selecting mechanism between said first and second ejection trays.

14. An image forming apparatus as defined in Claim 2, wherein said mode selecting mechanism is mounted on a control panel of said apparatus.

15. An image forming apparatus as defined in Claim 3, wherein said tray selecting mechanism is mounted on a control panel of said apparatus.

16. An image forming apparatus as defined in Claim 4, wherein said sheet selecting mechanism is mounted on a control panel of said apparatus.

17. An image forming apparatus as defined in Claim 6, wherein said cassette selecting mechanism is mounted on a control panel of said apparatus.

18. ~~An image forming apparatus as defined in Claim 1, wherein selections of a single-side recording mode and said double-side recording mode, said first and second ejection trays, and a type of sheet are made from an external host system.~~

19. ~~An image forming apparatus as defined in Claim 5, wherein a selection of said plurality of sheet supplying mechanisms is made from an external host system.~~

20. ~~An image forming apparatus as defined in Claim 1, wherein said first image carrying member has a property of photoconductivity and carries a toner image made in accordance with an electrophotographic method and said second image carrying member carries a toner image transferred from said first image carrying member.~~

21. ~~An image forming apparatus, comprising:  
an image reading mechanism configured to read an original;  
an image forming mechanism configured to perform an image recording operation including image forming, image carrying, and image transferring processes;  
a plurality of ejection trays;  
a plurality of sheet cassettes; and  
a sheet transferring mechanism configured to transfer a recording sheet from one of said plurality of sheet cassettes to a nip formed between said first and second image carrying members,  
wherein said image forming mechanism performs said image recording operation in response to a selection between said plurality of ejection trays in accordance with images from originals read by said image reading mechanism either in a single-side or double-side recording mode so that said plurality of ejection trays stack a stack of recording sheets in increasing order of pages.~~

22. ~~An image forming apparatus as defined in Claim 21, wherein said image forming mechanism forms a toner image in accordance with an electrophotographic method and comprises:  
a first image carrying member configured to form a toner image and to carry it thereon in increasing order of pages starting from a first page; and  
a second image carrying member configured to carry the toner image transferred from said first image carrying member,  
said first image carrying member transferring the toner image to one side of a recording sheet and said second image carrying member transferring the toner image to the other side of the recording sheet.~~

23. ~~An image forming apparatus as defined in Claim 21, wherein said plurality of ejection trays includes a first ejection tray configured to stack a plurality of output sheets in a straight orientation and a second ejection tray configured to stack a plurality of output sheets in a reversed orientation.~~

~~24. An image forming apparatus as defined in Claim 21, wherein said stack of recording sheets stacked in increasing order of pages is a stack of recording sheets recorded in said single-side recording mode.~~

~~25. An image forming apparatus as defined in Claim 21, wherein said stack of recording sheets stacked in increasing order of pages is a stack of recording sheets recorded in said double-side recording mode.~~

~~26. An image forming apparatus as defined in Claim 21, wherein said image reading mechanism reads an image on a side of a single-sided original in a single-side reading mode and images on both sides of a double-sided original in a double-side reading mode.~~

~~27. An image forming apparatus as defined in Claim 26, wherein said image forming mechanism records images in said single-side recording mode and outputs in increasing order of pages when said images are read in said double-side reading mode by said reading mechanism.~~

~~28. An image forming apparatus as defined in Claim 26, wherein said image forming mechanism records images in said double-side recording mode and outputs in increasing order of pages when said images are read in said double-side reading mode by said reading mechanism.~~

~~29. An image forming apparatus as defined in Claim 26, wherein said image reading mechanism reads images on both sides of a double-sided original through one time sheet transferring process by moving said double-side original.~~

~~30. An image forming apparatus as defined in Claim 29, wherein said image reading mechanism comprises:  
a first image reading unit configured to read an image of an original by moving the original;  
and  
a second image reading unit configured to read an image of an original by holding the original at a predetermined position.~~

~~31. An image forming apparatus as defined in Claim 30, wherein said second image reading unit includes a moving member that moves under a contact glass and is used as a part of said first image reading unit under a condition in that said moving member is stopped.~~

~~32. An image forming apparatus as defined in Claim 30, wherein said second image reading unit is usable when originals are placed on a sheet tray of said first image reading unit.~~

~~33. An image forming apparatus as defined in Claim 26, wherein said image reading mechanism includes a sheet reversing mechanism and reads images on both sides of an original.~~

~~34. An image forming apparatus as defined in Claim 21, wherein said image reading mechanism includes a detector for detecting an event that an image on reading is of white and cancels reading the image when the image is detected as a page of white.~~

~~35. An image forming apparatus as defined in Claim 21, wherein one of said plurality of ejection trays is formed in a space between said image reading mechanism and said image forming mechanism.~~

~~36. An image forming apparatus as defined in Claim 21, wherein said image reading mechanism includes a tray for ejecting originals, said tray having a size within a projection area of said apparatus.~~

~~37. An image forming apparatus as defined in Claim 21, wherein a recording sheet is transferred in an approximately straight line from one of said plurality of sheet cassettes to one of said plurality of ejection trays.~~

~~38. An image forming apparatus as defined in Claim 37, wherein said one of said plurality of sheet cassettes is a manual sheet inserting tray.~~

~~39. An image forming apparatus as defined in Claim 21, further comprising a control panel close to said image reading mechanism, said control panel comprising:  
a selecting mechanism configured to select one of said single-side recording and said double-side recording; and  
a selecting mechanism configured to select one of said plurality of ejection trays.~~

~~40. An image forming apparatus as defined in Claim 21, wherein said image forming mechanism forms images in increasing order of corresponding sheet numbers.~~

~~41. An image forming apparatus as defined in Claim 21, wherein said image forming mechanism forms a plurality of images in increasing order of pages when said image reading mechanism reads said plurality of images in increasing order of pages.~~

~~42. An image forming apparatus as defined in Claim 21, wherein said first image carrying member has a property of photoconductivity and said second image carrying member is a belt-shaped intermediate transfer member having a surface resistance in a range of from 10<sup>5</sup> to 10<sup>12</sup>.~~

~~43. An image forming apparatus as defined in Claim 42, further comprising a fixing mechanism configured to fix images attached on both sides of a recording sheet while said recording sheet is supported by said belt-shaped intermediate transfer member.~~

~~44. An image forming apparatus as defined in Claim 42, wherein said belt-shaped intermediate transfer member is of heat resistance.~~

~~45. An image forming apparatus as defined in Claim 21, wherein said image forming mechanism performs said image recording operation in accordance with image information sent from an external host system, one of said single-side recording mode and said double-side recording mode is selected by said external host system, and one of said plurality of ejection trays is selected by said external host system.~~

~~46. An image forming apparatus as defined in Claim 21, further comprising an external ejection tray unit that includes a connecting sheet path connected to a sheet path of said apparatus for turning and ejecting a recording sheet sent from said image forming mechanism into one of said plurality of ejection trays, wherein said external ejection tray unit stacks a plurality of recording sheet in increasing order of pages.~~

~~47. An image forming apparatus as defined in Claim 46, wherein said connecting sheet path is arranged along an edge portion of said one of said plurality of ejection trays.~~

~~48. An image forming apparatus as defined in Claim 47, further comprising a switching pawl configured to selectively switch between ways for a recording sheet to said one of said plurality of ejection trays and said external ejection tray unit.~~

~~49. An image forming apparatus as defined in Claim 21, further comprising another external ejection tray unit that includes a connecting sheet path connected to a sheet path of said apparatus for ejecting a recording sheet sent from said image forming mechanism in an approximately straight manner into one of said plurality of ejection trays, wherein said external ejection tray unit stacks a plurality of recording sheet in increasing order of pages.~~

~~50. An image forming apparatus, comprising:  
first image carrying means for carrying images in increasing order of corresponding sheet numbers;  
second image carrying means for carrying an image transferred from said first image carrying means;  
a plurality of ejection tray means including first ejection tray means for stacking a plurality of output sheets in a straight orientation and second ejection tray means for stacking a plurality of output sheets in a reversed orientation; and  
sheet transferring means for transferring a recording sheet to a nip formed between said first and second image carrying means,  
wherein said first image carrying means is caused to transfer an image to one surface of said recording sheet and, at the same time, said second image carrying means is caused to transfer another image to another surface of said recording sheet in response to a selection between said first and second ejection tray means in a double-side recording mode so that said first and second ejection tray means stack said plurality of recording sheets in increasing order of pages.~~

~~51. An image forming apparatus as defined in Claim 50, further comprising mode selecting means for selecting one of a single-side recording mode and said double-side recording mode.~~

52. An image forming apparatus as defined in Claim 50, further comprising tray selecting means for selecting one of said first and second ejection tray means.

53. An image forming apparatus as defined in Claim 50, further comprising sheet selecting means selecting a type of sheet, and wherein one of said first and second ejection tray means is selected in accordance with a selection made by said sheet selecting means.

54. An image forming apparatus as defined in Claim 50, further comprising a plurality of sheet supplying means each for supplying the recording sheets to said sheet transferring means.

55. An image forming apparatus as defined in Claim 54, further comprising cassette selecting means for selecting one of said plurality of sheet supplying means.

56. An image forming apparatus as defined in Claim 54, further comprising sheet selecting means for selecting a type of sheet, and wherein one of said plurality of sheet supplying means is selected in accordance with a selection made by said sheet selecting means.

57. An image forming apparatus as defined in Claim 50, further comprising extra sheet supplying means inserting a recording sheet in an approximately straight orientation, and wherein a recording sheet is transferred from said extra sheet supplying means to said first ejection tray means via said sheet transferring means.

58. An image forming apparatus as defined in Claim 57, further comprising sheet selecting means selecting a type of sheet, and wherein said extra sheet supplying means and said first ejection tray means are selected when said sheet selecting means selects a thick sheet.

59. An image forming apparatus as defined in Claim 57, wherein said extra sheet supplying means includes manual sheet insertion tray means.

60. An image forming apparatus as defined in Claim 59, further comprising sensing means for detecting an event in that said manual sheet insertion tray means is accessed by a user, and wherein said extra sheet supplying means and said first ejection tray means are selected when said sensing means detects said event.

61. An image forming apparatus as defined in Claim 50, wherein said first image carrying means is caused to transfer an image of odd page to an upper surface of said recording sheet and, at the same time, said second ejection tray means is caused to transfer an image of even page on a lower surface of said recording sheet when said second ejection tray means is selected in a double-side recording mode so that said second ejection tray means stacks a plurality of said recording sheets in increasing order of pages.

62. An image forming apparatus as defined in Claim 52, wherein said first image carrying means is caused to transfer an image to on one surface of said recording sheet and said second image carrying means is caused to transfer another image on another surface of said

recording sheet in response to a selection made by said tray selecting means between said first and second ejection tray means.

63. An image forming apparatus as defined in Claim 51, wherein said mode selecting means is mounted on a control panel of said apparatus.

64. An image forming apparatus as defined in Claim 52, wherein said tray selecting means is mounted on a control panel of said apparatus.

65. An image forming apparatus as defined in Claim 53, wherein said sheet selecting means is mounted on a control panel of said apparatus.

66. An image forming apparatus as defined in Claim 55, wherein said cassette selecting means is mounted on a control panel of said apparatus.

67. An image forming apparatus as defined in Claim 50, wherein selections of a single-side recording mode and said double-side recording mode, said first and second ejection tray means, and a type of sheet are made from an external host system.

68. An image forming apparatus as defined in Claim 54, wherein a selection of said plurality of sheet supplying means is made from an external host system.

69. An image forming apparatus as defined in Claim 50, wherein said first image carrying means has a property of photoconductivity and carries a toner image made in accordance with an electrophotographic method and said second image carrying means carries a toner image transferred from said first image carrying means.

70. An image forming apparatus, comprising:  
image reading means for reading an original;  
image forming means for performing an image recording operation including image forming, image carrying, and image transferring processes;  
a plurality of ejection tray means;  
a plurality of sheet cassette means; and  
sheet transferring means for transferring a recording sheet from one of said plurality of sheet cassette means to a nip formed between said first and second image carrying means, wherein said image forming means performs said image recording operation in response to a selection between said plurality of ejection tray means in accordance with images from originals read by said image reading means either in a single-side or double-side recording mode so that said plurality of ejection tray means stack a stack of recording sheets in increasing order of pages.

71. An image forming apparatus as defined in Claim 70, wherein said image forming means forms a toner image in accordance with an electrophotographic method and comprises:  
first image carrying means for forming a toner image and to carry it thereon in increasing order of pages starting from a first page; and

~~second image carrying means carrying the toner image transferred from said first image carrying means,  
said first image carrying means transferring the toner image to one side of a recording sheet and said second image carrying means transferring the toner image to the other side of the recording sheet.~~

~~72. An image forming apparatus as defined in Claim 70, wherein said plurality of ejection tray means includes first ejection tray means for stacking a plurality of output sheets in a straight orientation and a second ejection tray means for stacking a plurality of output sheets in a reversed orientation.~~

~~73. An image forming apparatus as defined in Claim 70, wherein said stack of recording sheets stacked in increasing order of pages is a stack of recording sheets recorded in said single-side recording mode.~~

~~74. An image forming apparatus as defined in Claim 70, wherein said stack of recording sheets stacked in increasing order of pages is a stack of recording sheets recorded in said double-side recording mode.~~

~~75. An image forming apparatus as defined in Claim 70, wherein said image reading means reads an image on a side of a single-sided original in a single-side reading mode and images on both sides of a double-sided original in a double-side reading mode.~~

~~76. An image forming apparatus as defined in Claim 75, wherein said image forming means records images in said single-side recording mode in increasing order of pages when said images are read in said double-side reading mode by said reading means.~~

~~77. An image forming apparatus as defined in Claim 75, wherein said image forming means records images in said double-side recording mode and outputs in increasing order of pages when said images are read in said double-side reading mode by said reading means.~~

~~78. An image forming apparatus as defined in Claim 75, wherein said image reading means reads images on both sides of a double-sided original through one time sheet transferring process by moving said double-side original.~~

~~79. An image forming apparatus as defined in Claim 78, wherein said image reading means comprises:  
first image reading means for reading an image of an original by moving the original; and  
second image reading means for reading an image of an original by holding the original at a predetermined position.~~

~~80. An image forming apparatus as defined in Claim 79, wherein said second image reading means includes moving means for moving under a contact glass and is used as a part of said first image reading means under a condition in that said moving means is stopped.~~



~~81. An image forming apparatus as defined in Claim 79, wherein said second image reading means is usable when originals are placed on a sheet tray of said first image reading means.~~

~~82. An image forming apparatus as defined in Claim 75, wherein said image reading means includes sheet reversing means for reversing an original and reads images on both sides of said original.~~

~~83. An image forming apparatus as defined in Claim 70, wherein said image reading means includes detecting means for detecting an event that an image on reading is of white and cancels reading of the image when the image is detected as a page of white.~~

~~84. An image forming apparatus as defined in Claim 70, wherein one of said plurality of ejection tray means is formed in a space between said image reading means and said image forming means.~~

~~85. An image forming apparatus as defined in Claim 70, wherein said image reading means includes tray means for ejecting originals, said tray means having a size within a projection area of said apparatus.~~

~~86. An image forming apparatus as defined in Claim 70, wherein a recording sheet is transferred in an approximately straight line from one of said plurality of sheet cassette means to one of said plurality of ejection tray means.~~

~~87. An image forming apparatus as defined in Claim 86, wherein said one of said plurality of sheet cassette means is manual sheet inserting tray means.~~

~~88. An image forming apparatus as defined in Claim 70, further comprising control panel means close to said image reading means, said control panel means comprising: selecting means for selecting one of said single-side recording and said double-side recording; and selecting means for selecting one of said plurality of ejection tray means.~~

~~89. An image forming apparatus as defined in Claim 70, wherein said image forming means forms images in increasing order of corresponding sheet numbers.~~

~~90. An image forming apparatus as defined in Claim 70, wherein said image forming means forms a plurality of images in increasing order of pages when said image reading means reads said plurality of images in increasing order of pages.~~

~~91. An image forming apparatus as defined in Claim 70, wherein said first image carrying means has a property of photoconductivity and said second image carrying means is belt-shaped intermediate transfer means having a surface resistance in a range of from 10<sup>5</sup> to 10<sup>12</sup>.~~

92. An image forming apparatus as defined in Claim 91, further comprising fixing means for fixing images attached on both sides of a recording sheet while said recording sheet is supported by said belt-shaped intermediate transfer means.

93. An image forming apparatus as defined in Claim 91, wherein said belt-shaped intermediate transfer means is of heat resistance.

94. An image forming apparatus as defined in Claim 70, wherein said image forming means performs said image recording operation in accordance with image information sent from an external host system, one of said single-side recording mode and said double-side recording mode is selected by said external host system, and one of said plurality of ejection tray means is selected by said external host system.

95. An image forming apparatus as defined in Claim 70, further comprising external ejection tray means for stacking a plurality of recording sheet in increasing order of pages, wherein said external ejection tray means includes a connecting sheet path connected to a sheet path of said apparatus for turning and ejecting a recording sheet sent from said image forming means into one of said plurality of ejection tray means.

96. An image forming apparatus as defined in Claim 95, wherein said connecting sheet path is arranged along an edge portion of said one of said plurality of ejection tray means.

97. An image forming apparatus as defined in Claim 96, further comprising switching pawl means for selectively switching between ways for a recording sheet to said one of said plurality of ejection tray means and said external ejection tray means.

98. An image forming apparatus as defined in Claim 70, further comprising another external ejection tray means for stacking a plurality of recording sheet in increasing order of pages, wherein said another external ejection tray means includes a connecting sheet path connected to a sheet path of said apparatus for ejecting a recording sheet sent from said image forming means in an approximately straight manner into one of said plurality of ejection tray means.

99. A method for image forming, comprising the steps of:  
selecting one of a single-side recording and a double-side recording;  
choosing one of a face-down stack and a face-up stack;  
inputting a plurality of images in increasing order of pages;  
performing a double-side recording operation when said double-side recording is selected, said performing step comprising the steps of:  
forming two successive images in increasing order of corresponding sheet numbers;  
transferring said two successive images onto both surfaces of a recording sheet;  
fixing said two successive images attached on said both surfaces of said recording sheet; and  
stacking said recording sheet in an orientation in accordance with a choice chosen by said choosing step;  
repeating said performing step until said images input by said inputting step are recorded;

~~executing a single-side recording operation when said single-side recording is selected, said  
executing step comprising the steps of:  
forming an images in increasing order of corresponding sheet numbers;  
transferring said image onto one surface of a recording sheet;  
fixing said image attached on said on surface of said recording sheet; and  
stacking said recording sheet in an orientation in accordance with a choice chosen by said  
choosing step; and  
repeating said executing step until said images input by said inputting step are recorded.~~

~~100. A method as defined in Claim 99, wherein said inputting step reads a plurality of  
originals and generates data of a plurality of images.~~

**ABSTRACT} [What is claimed as new and desired to be secured by letters patent of  
the United States is:**

## ABSTRACT OF THE DISCLOSURE]

An image forming apparatus includes first and second image carrying members, ejection trays, and a sheet transferring mechanism. The first image carrying member carries images in increasing order of corresponding sheet numbers. The second image carrying member carries an image transferred from the first image carrying member. The ejection trays include a first ejection tray {stacking}[, **which stacks**] output sheets in a straight [**or forward**] orientation[,] and a second ejection tray {stacking}[, **which stacks**] output sheets in a reversed orientation. The sheet transferring mechanism transfers a recording sheet to the first and second image carrying members. The first and second image carrying members transfer images onto both {surface} [**first and second surfaces**] of the recording sheet, at the same time, in response to a selection between the first and second ejection trays in a double-~~{side}~~ [**sided**] recording mode so that the first and second ejection trays stack the recording sheets in increasing order of {pages} [**page numbers**].

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The bracketed numbers refer to the Page and Paragraph for the **start** of the paragraph in both the **old** and the **new** documents.

[1:1 1:1] Changed	"Atty Docket No. 211790US-3" to "211790US-3"
[1:3 1:2] Del Paras	"TITLE OF THE INVENTION"
[1:3 1:5] Add Paras	"CROSS-REFERENCE ... reference herein."
[1:5 1:8] Changed	"FIELD OF THE INVENTION" to "Field of the Invention"
[1:6 1:9] Changed	"invention relates" to "invention generally relates"
[1:6 1:9] Changed	"forming, and" to "forming and"
[1:6 1:9] Changed	"particularly to" to "particularly, to"
[1:6 1:9] Changed	"forming capable" to "forming, which is capable"
[1:6 1:9] Changed	"pages " to "page numbers "
[1:7 1:10] Changed	"DISCUSSION ... BACKGROUND" to "Discussion of Background"
[1:8 1:11] Changed	"Some background " to "Some conventional "
[1:8 1:11] Changed	"including " to ", such as "
[1:8 1:11] Changed	"facsimile machines, etc. " to "facsimiles, ... devices, "
[1:8 1:11] Changed	"a double-side ... operation" to "a double-sided ... operation"
[1:8 1:11] Changed	"both sides" to "both the first and second sides"

<b>[1:8 1:11] Changed</b>	"the double-side ... operation" to "the double-sided ... operation"
<b>[1:8 1:11] Changed</b>	"these machines," to "these conventional machines,"
<b>[1:8 1:11] Changed</b>	"one " to "the first "
<b>[1:8 1:11] Changed</b>	"other " to "second "
<b>[1:8 1:11] Changed</b>	"After a completion" to "After completion"
<b>[1:8 1:11] Changed</b>	"forming," to "forming operation,"
<b>[1:9 2:1] Changed</b>	"The " to "Various problems ... with the "
<b>[1:9 2:1] Changed</b>	"side " to "sided "
<b>[1:9 2:1] Changed</b>	"method involves ... problems " to "operation, "
<b>[1:9 2:1] Changed</b>	"reversing a recording" to "reversing the recording"
<b>[1:9 2:1] Changed</b>	"etc" to "and other similar problems"
<b>[2:1 2:2] Changed</b>	"published ... describe " to "each of Japanese ... describes "
<b>[2:1 2:2] Changed</b>	"that " to "which "
<b>[2:1 2:2] Changed</b>	"both sides" to "both the first and second sides"
<b>[2:1 2:2] Changed</b>	"through " to "via an "
<b>[2:2 2:3] Changed</b>	"the published ... JAPA1-209470" to "JP '470"
<b>[2:2 2:3] Changed</b>	"image formed" to "image is formed"
<b>[2:2 2:3] Changed</b>	"member is" to "member and is"
<b>[2:2 2:3] Changed</b>	"one " to "a first "
<b>[2:2 2:3] Changed</b>	"other " to "second "
<b>[2:2 2:3] Changed</b>	"transfer ember." to "transfer member."

<b>[2:2 2:3] Changed</b>	"both sides" to "both the first and second sides"
<b>[2:2 2:3] Changed</b>	"which " to "and the recording sheet "
<b>[2:3 2:4] Changed</b>	"A published ... JPAP3-253881, " to "Japanese Unexamined ... "JP '881") "
<b>[2:3 2:4] Changed</b>	"that of the ... 3-253881, " to "the image ... of JP '881 "
<b>[2:3 2:4] Changed</b>	"tone " to "toner "
<b>[2:3 2:4] Changed</b>	"sides " to "the first ... respectively, "
<b>[2:4 3:1] Changed</b>	"the published ... JAPA10-142869, " to "JP '869 "
<b>[2:4 3:1] Changed</b>	"performs one" to "performs an one"
<b>[2:4 3:1] Changed</b>	"both sides" to "both the first and second sides"
<b>[2:4 3:1] Changed</b>	"the two transfer members." to "the first ... respectively."
<b>[2:4 3:1] Changed</b>	"including " to ", which includes "
<b>[2:4 3:1] Changed</b>	"mounted to" to "mounted, to"
<b>[2:4 3:1] Changed</b>	"the recording ... double-sided " to "the double-sided recording sheet"
<b>[2:4 3:1] Changed</b>	"images." to "images on ... sides thereof."
<b>[3:1 3:2] Changed</b>	"However, these " to "However, the "
<b>[3:1 3:2] Changed</b>	"apparatuses have" to "apparatuses, ... '881, have"
<b>[3:1 3:2] Changed</b>	"drawback in a stack" to "drawback with ... the stack"
<b>[3:1 3:2] Changed</b>	"Fig" to "FIG"
<b>[3:1 3:2] Changed</b>	"T1 but" to "T1, but"
<b>[3:1 3:2] Changed</b>	"a page order." to "page number order."

<b>[3:2 3:3] Changed</b>	"A published ... described " to "Japanese Unexamined ... describes "
<b>[3:2 3:3] Changed</b>	"This application ... use of a " to "A "
<b>[3:2 3:3] Changed</b>	"that makes " to "is used to make "
<b>[3:2 3:3] Changed</b>	"This application also describes a " to "A "
<b>[3:2 3:3] Changed</b>	"technique in" to "technique is also used in"
<b>[3:3 4:1] Changed</b>	"the above-described ... JPAP2000-19799, " to "JP '799 "
<b>[3:4 4:2] Changed</b>	"that " to "where "
<b>[3:4 4:2] Changed</b>	"apparatus having" to "apparatus, having"
<b>[3:4 4:2] Changed</b>	"trays, as" to "trays as"
<b>[3:4 4:2] Changed</b>	"Fig. " to "FIG. "
<b>[3:4 4:2] Changed</b>	"is applied with " to "applies "
<b>[3:4 4:2] Changed</b>	"sheet, as" to "sheet as"
<b>[3:4 4:2] Changed</b>	"the above-mentioned ... JPAP2000-19799" to "JP '799"
<b>[3:4 4:2] Changed</b>	"surface " to "surfaces "
<b>[3:5 4:3] Changed</b>	"Another published ... described " to "Japanese Unexamined ... describes "
<b>[3:5 4:3] Changed</b>	"reads images ... double-sided" to "reads images ... double-sided"
<b>[3:5 4:3] Changed</b>	"images on ... recording" to "images on ... recording"
<b>[3:5 4:3] Changed</b>	"reading one side" to "reading the first side"
<b>[3:5 4:3] Changed</b>	"and the other" to "and then, the second"
<b>[3:5 4:3] Changed</b>	"recording," to "recording operation,"



<b>[3:5 4:3] Changed</b>	"after a completion of recording an" <b>to</b> "after the ... of a first"
<b>[3:5 4:3] Changed</b>	"on one side" <b>to</b> "on a first side"
<b>[3:5 4:3] Changed</b>	"and another " <b>to</b> "is completed ... a second "
<b>[3:5 4:3] Changed</b>	"on the other side of" <b>to</b> "on the second side of"
<b>[3:6 4:4] Changed</b>	"Another published ... JPAP11-258864, " <b>to</b> "Japanese Unexamined ... 11-258864 "
<b>[3:6 4:4] Changed</b>	"reads images ... double-sided" <b>to</b> "reads images ... double-sided"
<b>[3:6 4:4] Changed</b>	"records " <b>to</b> "then recording "
<b>[3:6 4:4] Changed</b>	"read images ... recording" <b>to</b> "read images ... recording"
<b>[3:6 4:4] Changed</b>	"through " <b>to</b> "via a "
<b>[3:7 5:1] Changed</b>	"these " <b>to</b> "the "
<b>[3:7 5:1] Changed</b>	"apparatuses capable" <b>to</b> "apparatuses ... are capable"
<b>[3:7 5:1] Changed</b>	"double-side reading" <b>to</b> "double-sided reading"
<b>[3:7 5:1] Changed</b>	"double-side recording " <b>to</b> "double-sided ... that they"
<b>[3:7 5:1] Changed</b>	"in addition ... machine size." <b>to</b> "and this drawback ... machine size)."
<b>[3:9 5:3] Changed</b>	". In one example, a novel " <b>to</b> "which avoids ... example of an "
<b>[3:9 5:3] Changed</b>	"a first image ... member, a " <b>to</b> "first and "
<b>[3:9 5:3] Changed</b>	"second image ... plurality" <b>to</b> "second image ... plurality"
<b>[3:9 5:3] Changed</b>	"straight " <b>to</b> "forward "

[3:9 5:3] Changed	"this " to "the "
[3:9 5:3] Changed	"apparatus," to "apparatus ... first example,"
[3:9 5:3] Changed	"member is ... transfer an" to "member transfers an"
[3:9 5:3] Changed	"to one surface" to "to a first surface"
[3:9 5:3] Changed	"is caused to transfer another " to "transfers a second "
[3:9 5:3] Changed	"to another surface" to "to a second surface"
[3:9 5:3] Changed	"side " to "sided "
[3:9 5:3] Changed	"sheets in ... of pages." to "sheets in ... number order."
[3:9 5:3] Changed	"order of pages." to "order."
[4:1 6:1] Changed	"The above-mentioned image" to "The image"
[4:1 6:1] Changed	"apparatus may" to "apparatus ... example may"
[4:1 6:1] Changed	"select one" to "select any one"
[4:1 6:1] Changed	"single-side recording" to "single-sided recording"
[4:1 6:1] Changed	"the " to "a "
[4:1 6:1] Changed	"double-side recording" to "double-sided recording"
[4:2 6:2] Changed	"The above-mentioned image" to "The image"
[4:2 6:2] Changed	"apparatus may" to "apparatus ... example may"
[4:2 6:2] Changed	"select one" to "select any one"
[4:3 6:3] Changed	"The above-mentioned image" to "The image"
[4:3 6:3] Changed	"apparatus may" to "apparatus ... example may"
[4:3 6:3] Changed	"select a type" to "select the type"
[4:3 6:3] Changed	"sheet." to "sheet to be used."
[4:3 6:3] Changed	"case, one" to "case, any one"

<b>[4:4 6:4] Changed</b>	<b>"The above-mentioned image" to "The image"</b>
<b>[4:4 6:4] Changed</b>	<b>"apparatus may" to "apparatus ... example may"</b>
<b>[4:4 6:4] Changed</b>	<b>"mechanism " to "mechanisms "</b>
<b>[4:5 6:5] Changed</b>	<b>"The above-mentioned image" to "The image"</b>
<b>[4:5 6:5] Changed</b>	<b>"apparatus may" to "apparatus ... example may"</b>
<b>[4:5 6:5] Changed</b>	<b>"supplying mechanism." to "supplying mechanisms."</b>
<b>[4:6 6:6] Changed</b>	<b>"The above-mentioned image" to "The image"</b>
<b>[4:6 6:6] Changed</b>	<b>"apparatus may" to "apparatus ... example may"</b>
<b>[4:6 6:6] Changed</b>	<b>"select a type" to "select the type"</b>
<b>[4:6 6:6] Changed</b>	<b>"sheet." to "sheet to be used."</b>
<b>[4:6 6:6] Changed</b>	<b>"supplying mechanism is" to "supplying mechanisms is"</b>
<b>[5:1 6:7] Changed</b>	<b>"The above-mentioned image" to "The image"</b>
<b>[5:1 6:7] Changed</b>	<b>"apparatus may" to "apparatus ... example may"</b>
<b>[5:1 6:7] Changed</b>	<b>"straight " to "forward "</b>
<b>[5:2 7:1] Changed</b>	<b>"The above-mentioned image" to "The image"</b>
<b>[5:2 7:1] Changed</b>	<b>"apparatus may" to "apparatus ... example may"</b>
<b>[5:2 7:1] Changed</b>	<b>"select a type of sheet. In" to "select the ... be used. In"</b>
<b>[5:4 7:2] Changed</b>	<b>"The above-mentioned image" to "The image"</b>
<b>[5:4 7:2] Changed</b>	<b>"apparatus may" to "apparatus ... example may"</b>
<b>[5:4 7:2] Changed</b>	<b>"an event in that " to "when "</b>
<b>[5:4 7:2] Changed</b>	<b>"the event." to "that the user ... insertion tray."</b>
<b>[5:5 7:3] Changed</b>	<b>"may be caused to transfer" to "may transfer"</b>
<b>[5:5 7:3] Changed</b>	<b>"of odd page to " to "on odd-numbered pages onto "</b>

<b>[5:5 7:3] Changed</b>	"is caused ... even page on " to "transfers ... pages onto "
<b>[5:5 7:3] Changed</b>	"side " to "sided "
<b>[5:5 7:3] Changed</b>	"pages" to "page numbers"
<b>[5:6 7:4] Changed</b>	"may be caused to transfer an" to "may transfer a first"
<b>[5:6 7:4] Changed</b>	"to on one " to "onto a first "
<b>[5:6 7:4] Changed</b>	"is caused to " to "may "
<b>[5:6 7:4] Changed</b>	"transfer another ... on another" to "transfer a ... onto a second"
<b>[6:2 8:1] Changed</b>	"the above-mentioned image" to "the image"
<b>[6:2 8:1] Changed</b>	"apparatus," to "apparatus ... first example,"
<b>[6:2 8:1] Changed</b>	"single-side recording" to "single-sided recording"
<b>[6:2 8:1] Changed</b>	"double-side recording" to "double-sided recording"
<b>[6:2 8:1] Changed</b>	"and a type" to "and the type"
<b>[6:2 8:1] Changed</b>	"sheet may" to "sheet to be used may"
<b>[6:3 8:2] Changed</b>	"the above-mentioned image" to "the image"
<b>[6:3 8:2] Changed</b>	"apparatus," to "apparatus ... first example,"
<b>[6:4 8:3] Changed</b>	"and carries a" to "and may carry a"
<b>[6:4 8:3] Changed</b>	"and the " to ". The "
<b>[6:4 8:3] Changed</b>	"member carries a" to "member may carry a"
<b>[6:5 8:4] Changed</b>	"another novel " to "a second example of an "
<b>[6:5 8:4] Changed</b>	". In one example, ... apparatus " to "which "
<b>[6:5 8:4] Changed</b>	"this " to "the "
<b>[6:5 8:4] Changed</b>	"apparatus," to "apparatus ... second example,"

<b>[6:5 8:4] Changed</b>	<b>"selection between the" to "selection of one of the"</b>
<b>[6:5 8:4] Changed</b>	<b>"in a single-side" to "in single-sided"</b>
<b>[6:5 8:4] Changed</b>	<b>"single-side ... recording mode" to "single-sided ... recording modes"</b>
<b>[6:5 8:4] Changed</b>	<b>"pages" to "page numbers"</b>
<b>[7:1 9:1] Changed</b>	<b>"pages " to "page numbers "</b>
<b>[7:1 9:1] Changed</b>	<b>"one " to "a first "</b>
<b>[7:1 9:1] Changed</b>	<b>"the other " to "a second "</b>
<b>[7:2 9:2] Changed</b>	<b>"straight " to "forward "</b>
<b>[7:3 9:3] Changed</b>	<b>"sheets stacked" to "sheets, stacked"</b>
<b>[7:3 9:3] Changed</b>	<b>"pages " to "page numbers, "</b>
<b>[7:3 9:3] Changed</b>	<b>"single-side recording" to "single-sided recording"</b>
<b>[7:3 9:3] Changed</b>	<b>"double-side recording" to "double-sided recording"</b>
<b>[7:4 9:4] Changed</b>	<b>"single-side reading" to "single-sided reading"</b>
<b>[7:4 9:4] Changed</b>	<b>"both sides" to "both the first and second sides"</b>
<b>[7:4 9:4] Changed</b>	<b>"double-side reading" to "double-sided reading"</b>
<b>[7:5 9:5] Changed</b>	<b>"images in" to "images, in"</b>
<b>[7:5 9:5] Changed</b>	<b>"single-side ... outputs in" to "single-sided ... outputs, in"</b>
<b>[7:5 9:5] Changed</b>	<b>"pages " to "page numbers, "</b>
<b>[7:5 9:5] Changed</b>	<b>"double-side reading" to "double-sided reading"</b>
<b>[8:1 10:1] Changed</b>	<b>"images in" to "images, in"</b>
<b>[8:1 10:1] Changed</b>	<b>"double-side ... outputs in" to "double-sided ... outputs, in"</b>

<b>[8:1 10:1] Changed</b>	<b>"pages " to "page numbers, "</b>
<b>[8:1 10:1] Changed</b>	<b>"double-side reading" to "double-sided reading"</b>
<b>[8:2 10:2] Changed</b>	<b>"both sides" to "both the first and second sides"</b>
<b>[8:2 10:2] Changed</b>	<b>"through " to "via a "</b>
<b>[8:2 10:2] Changed</b>	<b>"side " to "sided "</b>
<b>[8:3 10:3] Changed</b>	<b>"first image ... to read an" to "first image ... to read an"</b>
<b>[8:3 10:3] Changed</b>	<b>"original and" to "original, and"</b>
<b>[8:3 10:3] Changed</b>	<b>"second image ... to read an" to "second image ... to read an"</b>
<b>[8:4 10:4] Changed</b>	<b>"unit under a condition in" to "unit on the condition "</b>
<b>[8:6 10:6] Changed</b>	<b>"reads " to "may read "</b>
<b>[8:6 10:6] Changed</b>	<b>"both sides" to "both the first and second sides"</b>
<b>[8:7 10:7] Changed</b>	<b>"detecting an event that an" to "detecting when an "</b>
<b>[8:7 10:7] Changed</b>	<b>"on reading " to "being read "</b>
<b>[8:7 10:7] Changed</b>	<b>"is of white " to "is white in color"</b>
<b>[8:7 10:7] Changed</b>	<b>"page of " to "blank "</b>
<b>[8:7 10:7] Changed</b>	<b>"white." to "white page."</b>
<b>[8:8 10:8] Changed</b>	<b>"the above-mentioned image" to "the image"</b>
<b>[8:8 10:8] Changed</b>	<b>"apparatus," to "apparatus ... second example,"</b>
<b>[9:2 11:2] Changed</b>	<b>"the above-mentioned image" to "the image"</b>
<b>[9:2 11:2] Changed</b>	<b>"apparatus," to "apparatus ... second example,"</b>
<b>[9:2 11:2] Changed</b>	<b>"from one of" to "from a first ... cassette of"</b>
<b>[9:2 11:2] Changed</b>	<b>"to one of" to "to a first ejection tray of"</b>

[9:2 11:2] Changed	"trays." to "trays"
[9:3 11:2] Changed	"The above-mentioned one " to ", wherein ... cassette "
[9:4 11:3] Changed	"The above-mentioned image" to "The image"
[9:4 11:3] Changed	"apparatus may" to "apparatus ... example may"
[9:4 11:3] Changed	"The above-mentioned control" to "The control"
[9:4 11:3] Changed	"select one ... single-side" to "select either a single-sided"
[9:4 11:3] Changed	"single-side ... recording " to "single-sided ... recording mode"
[9:6 11:5] Changed	"pages " to "page numbers "
[9:6 11:5] Changed	"of pages." to "of page numbers."
[9:7 11:6] Changed	"105 to 1012." to "105 $\Omega$ to 1012 $\Omega$ ."
[9:8 11:7] Changed	"The above-mentioned image" to "The image"
[9:8 11:7] Changed	"apparatus may" to "apparatus ... example may"
[9:8 11:7] Changed	"both sides" to "both the first and second sides"
[9:8 11:7] Changed	"sheet while" to "sheet, while"
[10:1 12:1] Changed	"be of " to "be made of a"
[10:1 12:1] Changed	"resistance" to "resistant material"
[10:2 12:2] Changed	"system. One ... single-side" to "system. Either a single-sided"
[10:2 12:2] Changed	"single-side recording" to "single-sided recording"
[10:2 12:2] Changed	"and the " to "or a "
[10:2 12:2] Changed	"double-side recording" to "double-sided recording"
[10:3 12:3] Changed	"The above-mentioned image" to "The image"

<b>[10:3 12:3] Changed</b>	"apparatus may" to "apparatus ... example may"
<b>[10:3 12:3] Changed</b>	"one " to "a first ejection tray "
<b>[10:3 12:3] Changed</b>	"pages" to "page numbers"
<b>[10:4 12:3] Changed</b>	"one " to "first ejection tray "
<b>[10:5 12:4] Changed</b>	"The above-mentioned image" to "The image"
<b>[10:5 12:4] Changed</b>	"apparatus may" to "apparatus ... example may"
<b>[10:5 12:4] Changed</b>	"ways for " to "sending "
<b>[10:5 12:4] Changed</b>	"one " to "first ejection tray "
<b>[10:5 12:4] Changed</b>	"and the" to "and sending ... sheet to the"
<b>[10:6 12:5] Changed</b>	"The above-mentioned image" to "The image"
<b>[10:6 12:5] Changed</b>	"apparatus may" to "apparatus ... example may"
<b>[10:6 12:5] Changed</b>	"that " to "which "
<b>[10:6 12:5] Changed</b>	"recording sheet in" to "recording sheets in"
<b>[10:6 12:5] Changed</b>	"pages" to "page numbers"
<b>[10:7 13:1] Changed</b>	"provides a ... method for" to "provides a method for"
<b>[10:7 13:1] Changed</b>	"In one example, a novel" to "In a first ... image forming"
<b>[10:7 13:1] Changed</b>	"selecting, ... step inputs " to ": selecting ... inputting "
<b>[10:7 13:1] Changed</b>	"pages. The " to "page numbers; "
<b>[10:7 13:1] Changed</b>	"performing ... operation when" to "performing ... operation, when"
<b>[10:7 13:1] Changed</b>	"is selected. ... forms two " to "mode is selected, ... and second "



<b>[10:7 13:1] Changed</b>	"numbers. The ... transfers the two" to "numbers, transferring ... and second"
<b>[10:7 13:1] Changed</b>	"onto both surfaces of" to "onto both ... surfaces of"
<b>[10:7 13:1] Changed</b>	"sheet. The ... fixes the two" to "sheet, fixing ... and second"
<b>[10:7 13:1] Changed</b>	"the both " to "both the first and second "
<b>[10:7 13:1] Changed</b>	"both surfaces ... stacks the" to "second surfaces, ... stacking the"
<b>[10:7 13:1] Changed</b>	"the choosing ... performing" to "the choosing ... performing"
<b>[10:7 13:1] Changed</b>	". The executing ... forms an " to "; executing ... by forming "
<b>[10:7 13:1] Changed</b>	"corresponding ... one surface" to "corresponding ... first surface"
<b>[10:7 13:1] Changed</b>	"a recording ... recording sheet in" to "a recording ... recording sheet in"
<b>[10:7 13:1] Changed</b>	"the choosing ... executing" to "the choosing ... executing"
<b>[11:1 13:2] Changed</b>	"generates " to "generate "
<b>[11:3 14:2] Changed</b>	"application " to "invention "
<b>[12:1 14:3] Changed</b>	"Fig" to "FIG"
<b>[12:1 14:3] Changed</b>	"background " to "conventional "
<b>[12:2 14:4] Changed</b>	"Fig" to "FIG"
<b>[12:3 14:5] Changed</b>	"Fig. 3 is ... explaining " to "FIG. 3 is ... plan view of "

<b>[12:3 14:5] Changed</b>	<b>"of Fig." to "of FIG."</b>
<b>[12:4 14:6] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[12:5 14:7] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[12:5 14:7] Changed</b>	<b>"of Fig. " to "of FIG. "</b>
<b>[12:5 14:7] Changed</b>	<b>"(ADF)" to "or ADF"</b>
<b>[12:6 14:8] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[12:6 14:8] Changed</b>	<b>"of Fig. " to "of FIG. "</b>
<b>[12:7 14:9] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[12:7 14:9] Changed</b>	<b>"the ADF of Fig." to "the automatic ... ADF of FIG."</b>
<b>[12:8 14:10] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[12:8 14:10] Changed</b>	<b>"of Fig. " to "of FIG. "</b>
<b>[12:8 14:10] Changed</b>	<b>"ADF;" to "Automatic ... feeder or ADF;"</b>
<b>[12:9 14:11] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[12:9 14:11] Changed</b>	<b>"Figs" to "FIGS"</b>
<b>[12:10 14:12] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[12:10 14:12] Changed</b>	<b>"of Fig. " to "of FIG. "</b>
<b>[12:11 15:1] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[12:11 15:1] Changed</b>	<b>"(ADF) " to "or ADF "</b>
<b>[13:1 15:2] Chgd All</b>	<b>"Fig" to "FIG"</b>
<b>[13:1 15:2] Changed</b>	<b>"of Fig. 5 " to "of FIG. 5,"</b>
<b>[13:1 15:2] Changed</b>	<b>"the ADF" to "the Automatic ... feeder or ADF"</b>
<b>[13:1 15:2] Changed</b>	<b>"Fig.5" to "FIG.5"</b>
<b>[13:3 15:4] Changed</b>	<b>"the invention" to "the present invention"</b>

[13:4 15:5] Changed	"drawings" to "drawing"
[13:4 15:5] Changed	"particularly to Fig. 2, " to "FIG. 2 illustrates "
[13:4 15:5] Changed	"is described. As " to ". Like the printer "
[13:4 15:5] Changed	"in Fig." to "in FIG."
[13:4 15:5] Changed	"is provided ... center with " to "shown in FIG. 2 has "
[13:4 15:5] Changed	"serving " to "at its approximate ... 1 serves "
[13:4 15:5] Changed	"Around the ... drum 1, the " to "The "
[13:4 15:5] Changed	"including " to ", which are ... including: "
[13:4 15:5] Changed	", a cleaning unit 2, " to "; "
[13:4 15:5] Changed	"3, a" to "3; a"
[13:4 15:5] Changed	"4, and" to "4; and"
[13:4 15:5] Changed	"Above, the ... drum 1, an " to "An "
[13:4 15:5] Changed	"which " to "at a position ... exposure unit 7 "
[13:4 15:5] Changed	"a direction " to "a predetermined ... so as to be"
[13:4 15:5] Changed	"5 to" to "5 in order to"
[13:5 16:1] Changed	"In the printer 100, the " to "The "
[13:5 16:1] Changed	"which " to "within the ... cartridge "
[13:5 16:1] Changed	"a time when ... for example." to "any time when ... life is over."
[13:6 16:2] Changed	"20 under" to "20 located at a position under"
[13:6 16:2] Changed	"member, to which " to "member, which contacts"
[13:6 16:2] Changed	"1 contacts." to "1."
[13:6 16:2] Changed	"is extended " to "extends, "

[13:6 16:2] Changed	"pressure between" to "pressure, between"
[13:6 16:2] Changed	"is rotated " to "the intermediate ... rotates in a "
[13:6 16:2] Changed	"counterclockwise." to "counterclockwise direction."
[13:6 16:2] Changed	"a property of electric " to "electrical "
[13:6 16:2] Changed	"by which " to "properties so that "
[13:6 16:2] Changed	", and also ... property of " to "thereto. The ... also has "
[13:6 16:2] Changed	"resistance." to "resistance properties."
[13:6 16:2] Changed	"105f $\Omega$ to 1012f $\Omega$ ." to "approximately ... approximately 1012 $\Omega$ ."
[14:1 16:3] Changed	"The intermediate ... supporting " to "Rollers 14 ... inside of "
[14:1 16:3] Changed	", cooling ... mechanism 21" to ". Rollers ... transfer belt 10"
[14:1 16:3] Changed	"source such" to "source, such"
[14:1 16:3] Changed	"and fixes " to ", for fixing "
[14:1 16:3] Changed	"image, transferred onto" to "image onto"
[14:1 16:3] Changed	"on the same " to "after the ... onto the "
[14:1 16:3] Changed	"opposite to the" to "opposite of the"
[14:1 16:3] Changed	"1 relative" to "1, relative"
[14:1 16:3] Changed	"10 so" to "10, so"
[14:1 16:3] Changed	"image formed" to "image, formed"
[14:1 16:3] Changed	"1 onto" to "1, onto"
[14:2 17:1] Changed	"arranged around" to "arranged at ... positions around"

<b>[14:2 17:1] Changed</b>	"having inside a" to "having à"
<b>[14:2 17:1] Changed</b>	"source such" to "source, such"
<b>[14:2 17:1] Changed</b>	"heater and fixes" to "heater, inside ... roller 19 fixes"
<b>[14:2 17:1] Changed</b>	", transferred ... the same " to "onto the "
<b>[14:2 17:1] Changed</b>	"sheet." to "sheet, after ... recording sheet."
<b>[14:2 17:1] Changed</b>	"held such as" to "held so as"
<b>[14:2 17:1] Changed</b>	"moved " to "movable "
<b>[14:2 17:1] Changed</b>	"directions G" to "directions ... double-sided arrow G"
<b>[14:2 17:1] Changed</b>	"contact under ... away from the" to "contact the"
<b>[14:2 17:1] Changed</b>	"18." to "18, under ... roller 18."
<b>[14:2 17:1] Changed</b>	"inside the" to "inside of the"
<b>[14:2 17:1] Changed</b>	"position left " to "position to a left of"
<b>[15:1 17:2] Changed</b>	"provided inside with" to "provided with"
<b>[15:1 17:2] Changed</b>	"25d so" to "25d located ... thereof so"
<b>[15:1 17:2] Changed</b>	"directions H" to "directions ... double-sided arrow H"
<b>[15:2 17:3] Changed</b>	"26 that contains" to "26, which contains"
<b>[15:2 17:3] Changed</b>	"P is" to "P, is"
<b>[15:2 17:3] Changed</b>	"100 and is configured to" to "100. The sheet ... configured so as to"
<b>[15:2 17:3] Changed</b>	"pulled " to "insertable and removable "
<b>[15:2 17:3] Changed</b>	"in a right ... sheet feed " to ". As shown ... sheet feeding "
<b>[15:2 17:3] Changed</b>	"i.e., a right direction in Fig." to "i.e., towards the right in FIG."

<b>[15:2 17:3] Changed</b>	"position right to" to "position to the right of"
<b>[15:2 17:3] Changed</b>	"sheet to" to "sheet P to"
<b>[15:2 17:3] Changed</b>	"35 that includes" to "35, which includes"
<b>[15:2 17:3] Changed</b>	"P are placed " to "P may be placed,"
<b>[15:2 17:3] Changed</b>	"provided to a right side" to "provided on a right-hand side"
<b>[15:2 17:3] Changed</b>	"a sheet feed roller 36" to "a sheet feeding roller 36"
<b>[15:2 17:3] Changed</b>	"sheet placed" to "sheet P placed"
<b>[15:2 17:3] Changed</b>	"sheet inserted" to "sheet P, inserted"
<b>[15:2 17:3] Changed</b>	"35 is" to "35, is"
<b>[15:3 18:1] Changed</b>	"position left to" to "position to the left of"
<b>[15:3 18:1] Changed</b>	"i.e., " to "such as "
<b>[15:3 18:1] Changed</b>	"provided to a left side" to "provided at a left-hand side"
<b>[15:3 18:1] Changed</b>	"sheet is" to "sheet P is"
<b>[15:3 18:1] Changed</b>	"Fig" to "FIG"
<b>[15:3 18:1] Changed</b>	"in a direction " to "in the direction of arrow"
<b>[16:1 18:2] Changed</b>	"33 for" to "33, for"
<b>[16:1 18:2] Changed</b>	"P are" to "P, are"
<b>[16:1 18:2] Changed</b>	"34 for" to "34, for"
<b>[16:1 18:2] Changed</b>	"40 are" to "40, are"
<b>[16:1 18:2] Changed</b>	"32 for" to "32, for"
<b>[16:1 18:2] Changed</b>	"44 are" to "44, are"
<b>[16:1 18:2] Changed</b>	"position left to" to "position to the left of"
<b>[16:2 19:1] Changed</b>	"Fig. 2 " to "FIG. 2, which is "

[16:2 19:1] Changed	"way performs" to "way, performs"
[16:2 19:1] Changed	"both surfaces" to "both the first and second surfaces"
[16:2 19:1] Changed	"sheet," to "sheet P,"
[16:2 19:1] Changed	"be first formed " to "be formed first"
[16:2 19:1] Changed	"be next formed " to "be formed second"
[16:2 19:1] Changed	"P on" to "P, on"
[16:2 19:1] Changed	"first image ... referred to as" to "first image ... referred to as"
[16:2 19:1] Changed	"other " to "second "
[16:2 19:1] Changed	"surface on" to "surface, on"
[16:2 19:1] Changed	"second image ... referred to as" to "second image ... referred to as"
[16:3 19:2] Changed	"i.e., " to "such as "
[16:3 19:2] Changed	"Light from" to "Light, from"
[16:3 19:2] Changed	"7 is" to "7, is"
[16:3 19:2] Changed	" $f\Delta$ " to " $\theta$ "
[16:4 19:3] Changed	"the convenience" to "the sake of convenience,"
[16:4 19:3] Changed	"convenience sake," to "convenience,"
[16:4 19:3] Changed	"toner remaining" to "toner, remaining"
[16:4 19:3] Changed	"drum 1 is removed" to "drum 1, is removed"
[17:1 20:1] Changed	"Fig" to "FIG"
[17:1 20:1] Changed	"controlled to keep" to "controlled ... to be kept"
[17:1 20:1] Changed	", that is, ... cut off or " to ". In other ... or else, "

[17:2 20:2] Changed	"image in" to "image, in"
[17:2 20:2] Changed	"like " to "similar "
[17:2 20:2] Changed	"as " to "to that "
[17:2 20:2] Changed	"1 is" to "1, is"
[17:2 20:2] Changed	"carrying " to ", which carries "
[17:2 20:2] Changed	"image is" to "image, is"
[17:2 20:2] Changed	"P is started to" to "P starts to"
[17:2 20:2] Changed	"feed " to "feeding "
[17:2 20:2] Changed	"a direction ... arrow in Fig" to "either a counterclockwise ... arrows in FIG"
[17:3 20:3] Changed	"10 moved" to "10, which is moved"
[17:3 20:3] Changed	"is rotated, " to ", rotates, "
[17:3 20:3] Changed	"image carried" to "image, carried"
[17:3 20:3] Changed	"10 is" to "10, is"
[18:1 21:1] Changed	"image formed" to "image, which is formed"
[18:1 21:1] Changed	"1 is" to "1, is"
[18:1 21:1] Changed	"in " to "on "
[18:3 21:3] Changed	"attached on the" to "attached to the"
[18:3 21:3] Changed	"is moved such " to "moves slightly downwardly so "
[18:3 21:3] Changed	"presses " to "is pressed into contact with "
[18:3 21:3] Changed	"via " to "and "
[18:3 21:3] Changed	"belt 10. Thereby," to "belt 10 is held therebetween. Thereby,"



[18:3 21:3] Changed	"and therefore " to "so that "
[18:3 21:3] Changed	"images are kept" to "images can be kept"
[18:3 21:3] Changed	"desirable conditions " to "a desirably fixed state, "
[19:1 22:2] Changed	"stacking in page order" to "stacking in ... number order"
[19:1 22:2] Changed	"image is needed ... generated " to "image needs ... generated first"
[19:1 22:2] Changed	"image generated afterwards is" to "image needs ... and then,"
[19:1 22:2] Changed	"More specifically" to "In other words"
[19:1 22:2] Changed	"order is needed to" to "order needs to"
[19:1 22:2] Changed	"page has" to "page number has"
[19:1 22:2] Changed	"image," to "image thereon,"
[19:1 22:2] Changed	"image of the" to "image, on the"
[19:1 22:2] Changed	"page is" to "page number, is"
[19:1 22:2] Changed	"the image ... numbers is" to "the page numbers ... operation is"
[19:1 22:2] Changed	";" to ":"
[19:2 22:3] Changed	"2 _ 1 _ ... _ _E_E_E_E" to "2 → 1 → 4 ... 5 → ..."
[19:3 22:4] Changed	"the recording" to "the sheet ... recording"
[19:3 22:4] Changed	"in sheet numbers is expressed as;" to "is as follows:"
[19:4 23:1] Changed	"sheet _ 2nd sheet _ 3rd" to "sheet → 2nd sheet → 3rd"
[19:4 23:1] Changed	"_ _E_E_E_E" to "→ ... "
[19:5 23:2] Changed	"forming is" to "forming operation is"

<b>[19:5 23:2] Changed</b>	"The " to "For example, the "
<b>[19:5 23:2] Changed</b>	"on, for example." to "on."
<b>[19:6 23:3] Changed</b>	"performs " to "perform "
<b>[19:6 23:3] Changed</b>	"that is" to "i.e."
<b>[19:6 23:3] Changed</b>	"one " to "the page "
<b>[19:6 23:3] Changed</b>	"last pages are" to "last page are"
<b>[19:6 23:3] Changed</b>	"on a sheet first output." to "on the sheet ... output first."
<b>[19:6 23:3] Changed</b>	"a double-side recording is" to "a double-sided ... operation is"
<b>[19:6 23:3] Changed</b>	"single-side recording," to "single-sided recording"
<b>[19:6 23:3] Changed</b>	"recording," to "recording operation,"
<b>[19:6 23:3] Changed</b>	"term double-side recording means" to "term double-sided ... operation means"
<b>[19:6 23:3] Changed</b>	"both sides" to "both the first and second sides"
<b>[19:6 23:3] Changed</b>	"single-side recording " to "single-sided ... operation"
<b>[20:1 23:4] Changed</b>	"having " to ", which has "
<b>[20:1 23:4] Changed</b>	"1 faces up" to "1, faces upwardly"
<b>[20:1 23:4] Changed</b>	"stacking in page order" to "stacking in ... number order"
<b>[20:1 23:4] Changed</b>	"image is needed ... generated " to "image needs ... generated first"
<b>[20:1 23:4] Changed</b>	"10 and the second" to "10 and then, the second"
<b>[20:1 23:4] Changed</b>	"image generated ... transferred" to "image needs ... transferred"

[20:1 23:4] Changed	"It is needed to be" to "It must be"
[20:1 23:4] Changed	"odd page" to "odd-numbered page"
[20:1 23:4] Changed	"image," to "image thereon,"
[20:1 23:4] Changed	"is first generated " to "is generated first"
[20:1 23:4] Changed	"even page" to "even-numbered page"
[20:1 23:4] Changed	"generated so" to "generated afterwards so"
[20:1 23:4] Changed	"the image ... numbers is" to "the page numbers ... forming is"
[20:1 23:4] Changed	"," to ":"
[20:2 24:1] Changed	"1 _ 2 _ ... _ _E_E_E_E" to "1 → 2 → 3 ... 6 → ..."
[20:3 24:2] Changed	"the recording" to "the sheet ... recording"
[20:3 24:2] Changed	"in sheet numbers is expressed as;" to "is as follows:"
[21:1 24:3] Changed	"sheet _ 2nd sheet _ 3rd" to "sheet → 2nd sheet → 3rd"
[21:1 24:3] Changed	"_ _E_E_E_E" to "→ ... "
[21:3 24:5] Changed	"In any case, either " to "In either case of"
[21:3 24:5] Changed	"44, the image ... increasing" to "44, the image ... increasing"
[21:3 24:5] Changed	"find a sheet to see" to "find any sheet"
[21:3 24:5] Changed	"if the image ... performed in a" to "if the image ... performed in a"
[21:3 24:5] Changed	"by seeing, particularly," to "by particularly"
[21:3 24:5] Changed	"particularly, the" to "particularly reviewing the"
[21:3 24:5] Changed	"or first" to "or the first"

[21:3 24:5] Changed	"When the image ... decreasing" to "When the image ... decreasing"
[21:3 24:5] Changed	"that is" to "i.e."
[21:3 24:5] Changed	"is first output," to "is output"
[21:3 24:5] Changed	"output," to "output first,"
[21:3 24:5] Changed	"first page is output." to "first page ... is output."
[21:4 24:6] Changed	"addition, ... performed" to "addition, ... performed"
[21:4 24:6] Changed	"facilitates " to ", the "
[21:4 24:6] Changed	"at an occurrence of " to "is facilitated when "
[21:4 24:6] Changed	"jam in" to "jam occurs in"
[21:4 24:6] Changed	"eliminating conditions of" to "eliminating ... leading to"
[21:4 24:6] Changed	"forming from" to "forming operation from"
[21:4 24:6] Changed	"included in " to "including "
[21:5 25:1] Changed	"100, the" to "100, during ... mode, the"
[21:5 25:1] Changed	"can select ... either the" to "can select either the"
[21:5 25:1] Changed	"through " to "via "
[21:5 25:1] Changed	"(Fig. 3), ... select in the " to "(to be explained ... During a "
[21:5 25:1] Changed	"recording mode either one" to "recording ... either one"
[21:5 25:1] Changed	"forming is controlled to" to "forming operation is controlled so as to"
[21:5 25:1] Changed	"so that " to "and thus, "
[21:5 25:1] Changed	"sheets are" to "sheets P are"

[21:5 25:1] Changed	"forming according" to "forming operation, according"
[21:5 25:1] Changed	"numbers is" to "numbers, is"
[21:5 25:1] Changed	", which is not shown" to "(not shown)"
[22:1 25:2] Changed	"forming." to "forming operation."
[22:1 25:2] Changed	"side " to "sided "
[22:1 25:2] Changed	"recording without" to "recording operation without"
[22:1 25:2] Changed	"operations" to "tasks"
[22:1 25:2] Changed	"forming can" to "forming operation can"
[22:2 25:3] Changed	"recording ... transferred" to "recording ... transferred"
[22:2 25:3] Changed	"44, a passage of the" to "44, the"
[22:2 25:3] Changed	"sheet is approximately straight." to "sheet P passes ... straight manner."
[22:2 25:3] Changed	"including " to ", such as "
[22:2 25:3] Changed	"inserted in the" to "inserted into the"
[22:2 25:3] Changed	"through the straight" to "through an approximately straight"
[22:2 25:3] Changed	"side " to "sided "
[22:2 25:3] Changed	"recording and" to "recording mode and"
[22:2 25:3] Changed	"page order," to "page number order,"
[22:2 25:3] Changed	"in running " to "of being too ... while passing "
[22:2 25:3] Changed	"the passage." to "the printer 100."
[22:3 26:1] Changed	"side recorded " to "sided recording "
[22:3 26:1] Changed	"page order." to "page number order."
[22:4 26:2] Changed	"forming," to "forming operation,"

[23:1 26:3] Changed	"25 separated" to "25, separated"
[23:1 26:3] Changed	"10 is" to "10, is"
[23:1 26:3] Changed	"10 to the" to "10 and onto the"
[23:1 26:3] Changed	"is scraped" to "is then scraped"
[23:1 26:3] Changed	"toner applied with heat" to "toner, after ... applied thereto"
[23:1 26:3] Changed	"19 is" to "19, is"
[23:2 27:1] Changed	"10 after" to "10, after"
[23:2 27:1] Changed	"process may" to "process, may"
[23:3 27:2] Changed	"the single-side recording in" to "the single-sided ... operation in"
[23:3 27:2] Changed	"100 are explained. ... recording" to "100 will be ... recording"
[23:3 27:2] Changed	"single-side recording using" to "single-sided ... operation in which"
[23:3 27:2] Changed	"is different" to "is used is different"
[23:3 27:2] Changed	"that using " to "the procedure ... in which "
[23:3 27:2] Changed	"44." to "44 is used."
[23:3 27:2] Changed	"in a form" to "in the form"
[24:1 27:3] Changed	"Fig" to "FIG"
[24:2 28:1] Changed	"upward " to "upwardly "
[24:2 28:1] Changed	"direction A1" to "direction of arrow A1"
[24:2 28:1] Changed	"number " to "order "
[24:2 28:1] Changed	"its " to "the "

[24:2 28:1] Changed	"top when" to "top of the stack when"
[24:2 28:1] Changed	"of the image ... page numbers" to "of the page ... operation"
[24:2 28:1] Changed	"," to ":"
[24:3 28:2] Changed	"1 _ 2 _ ... _ _E_E_E_E" to "1 → 2 → 3 ... 6 → ..."
[24:4 28:3] Changed	"the recording" to "the sheet ... recording"
[24:4 28:3] Changed	"in sheet numbers in this" to "in this"
[24:4 28:3] Changed	"expressed as;" to "as follows:"
[25:1 28:4] Changed	"sheet _ 2nd sheet _ 3rd" to "sheet → 2nd sheet → 3rd"
[25:1 28:4] Changed	"_ _E_E_E_E" to "→ ... "
[25:2 28:5] Changed	"image formed" to "image, formed"
[25:2 28:5] Changed	"1 is" to "1, is"
[25:2 28:5] Changed	"belt." to "belt 10."
[25:2 28:5] Changed	"position between" to "position, between"
[25:2 28:5] Changed	"10 in" to "10, in"
[25:2 28:5] Changed	"Then, the ... intermediate transfer" to "Then, the ... intermediate transfer"
[25:2 28:5] Changed	"10 is" to "10, is"
[25:2 28:5] Changed	"direction A2" to "direction of the arrow A2"
[25:2 28:5] Changed	"number " to "order "
[25:2 28:5] Changed	"of sheet numbers." to "of page numbers."
[25:2 28:5] Changed	"forming is" to "forming operation is"
[25:2 28:5] Changed	"numbers from the" to "numbers starting with the"

<b>[25:2 28:5] Changed</b>	"plurality ... recording sheet P" to "plurality of recording sheets P"
<b>[25:2 28:5] Changed</b>	"numbers with" to "numbers starting with"
<b>[25:2 28:5] Changed</b>	"its " to "the "
<b>[25:2 28:5] Changed</b>	"top when" to "top of the stack when"
<b>[25:2 28:5] Changed</b>	"the image ... numbers is" to "the page numbers ... operation is"
<b>[25:2 28:5] Changed</b>	"," to ":"
<b>[25:3 29:1] Changed</b>	"1 _ 2 _ ... _ _E_E_E_E" to "1 → 2 → 3 ... 6 → ..."
<b>[25:4 29:2] Changed</b>	"the recording" to "the sheet ... recording"
<b>[25:4 29:2] Changed</b>	"in sheet numbers is expressed as;" to "is as follows:"
<b>[25:5 29:3] Changed</b>	"sheet _ 2nd sheet _ 3rd" to "sheet → 2nd sheet → 3rd"
<b>[25:5 29:3] Changed</b>	"_ _E_E_E_E" to "- ... "
<b>[25:6 29:4] Changed</b>	"side " to "sided "
<b>[25:6 29:4] Changed</b>	"recording," to "recording operation,"
<b>[25:6 29:4] Changed</b>	"the image" to "the page numbers in the image"
<b>[25:6 29:4] Changed</b>	"in page numbers " to "operation "
<b>[25:6 29:4] Changed</b>	"a " to "the only "
<b>[26:1 29:5] Changed</b>	"the user can select in " to "when using "
<b>[26:1 29:5] Changed</b>	"the single-side recording mode" to "the single-sided recording mode,"
<b>[26:1 29:5] Changed</b>	"recording mode either the" to "recording ... either the"
<b>[26:1 29:5] Changed</b>	"through " to "via "



[26:1 29:5] Changed	"(Fig. 3), ... recording mode " to "(to be explained ... may select "
[26:1 29:5] Changed	"44, the" to "44, and then, the"
[26:1 29:5] Changed	"forming is" to "forming operation is"
[26:1 29:5] Changed	"forming." to "forming operation."
[26:1 29:5] Changed	"double-side recording " to "double-sided ... operation"
[26:1 29:5] Changed	"perform complex operations" to "perform any complex tasks"
[26:2 30:1] Changed	"the single-side recording mode," to "the single-sided recording mode,"
[26:2 30:1] Changed	"including " to ", such as "
[26:2 30:1] Changed	"through the straight passage." to "through a ... printer 100."
[26:2 30:1] Changed	"in the single-side" to "in a single-sided"
[26:2 30:1] Changed	"the single-side recording and" to "a single-sided ... operation and"
[26:2 30:1] Changed	"page order," to "page number order,"
[26:2 30:1] Changed	"running " to "being run "
[26:2 30:1] Changed	"the passage." to "the passage ... printer 100."
[26:3 30:2] Changed	"in the increasing" to "in an increasing"
[26:3 30:2] Changed	"numbers such" to "numbers, such"
[26:3 30:2] Changed	"in both cases ... recordings" to ", in both ... operation"
[26:3 30:2] Changed	"forming is" to "forming operation is"

<b>[26:3 30:2] Changed</b>	<b>"addition, ... the user can" to "addition, ... the user can"</b>
<b>[26:3 30:2] Changed</b>	<b>"upon occurrence" to "upon the occurrence"</b>
<b>[26:3 30:2] Changed</b>	<b>"error of the paper" to "error, such as a paper"</b>
<b>[27:1 31:1] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[27:1 31:1] Changed</b>	<b>"provided to the" to "provided on the"</b>
<b>[27:1 31:1] Changed</b>	<b>"in Fig. " to "in FIG. "</b>
<b>[27:1 31:1] Changed</b>	<b>"a LCD (liquid" to "a liquid"</b>
<b>[27:1 31:1] Changed</b>	<b>"display) 51" to "display or LCD 51"</b>
<b>[27:1 31:1] Changed</b>	<b>"the condition of the printer" to "the printer"</b>
<b>[27:1 31:1] Changed</b>	<b>"between online " to "between being ... condition"</b>
<b>[27:1 31:1] Changed</b>	<b>"and offline." to "and an offline"</b>
<b>[27:1 31:1] Changed</b>	<b>"offline." to "offline condition."</b>
<b>[27:1 31:1] Changed</b>	<b>"resets the present" to "resets present"</b>
<b>[27:1 31:1] Changed</b>	<b>"designates ... recording" to "designates ... recording"</b>
<b>[27:1 31:1] Changed</b>	<b>"P." to "P to be used."</b>
<b>[27:1 31:1] Changed</b>	<b>"sheet such" to "sheet, such"</b>
<b>[27:1 31:1] Changed</b>	<b>"A double-side recording button" to "A double-sided recording button"</b>
<b>[27:1 31:1] Changed</b>	<b>"the double-side recording mode" to "the double-sided recording mode"</b>
<b>[27:1 31:1] Changed</b>	<b>"58 having ... triangle mark" to "58, being ... triangular mark,"</b>
<b>[27:1 31:1] Changed</b>	<b>"mark scrolls upwards" to "mark, scrolls "</b>

<b>[27:1 31:1] Changed</b>	"LCD 51 and a" <b>to</b> "LCD 51 upwardly and a"
<b>[27:1 31:1] Changed</b>	"having a black ... downwards" <b>to</b> ", being a ... downwardly"
<b>[27:1 31:1] Changed</b>	"covers the ... selecting " <b>to</b> "allows for the selection of "
<b>[27:1 31:1] Changed</b>	"and of selecting the" <b>to</b> "and the selection of the"
<b>[27:2 31:2] Changed</b>	"the double-side recording mode" <b>to</b> "the double-sided recording mode"
<b>[27:2 31:2] Changed</b>	"the double-side recording button" <b>to</b> "the double-sided recording button"
<b>[27:2 31:2] Changed</b>	"single-side recording" <b>to</b> "single-sided recording"
<b>[27:3 32:1] Changed</b>	"appropriate page order in" <b>to</b> "appropriate page number order in"
<b>[27:3 32:1] Changed</b>	"single-side recording " <b>to</b> "single-sided ... operation"
<b>[27:3 32:1] Changed</b>	"double-side recording " <b>to</b> "double-sided ... operation"
<b>[27:3 32:1] Changed</b>	"the page order without" <b>to</b> "the page number order without"
<b>[27:3 32:1] Changed</b>	"forming relative" <b>to</b> "forming operation relative"
<b>[28:1 32:2] Changed</b>	"including " <b>to</b> ", such as "
<b>[28:1 32:2] Changed</b>	"an OHP" <b>to</b> "an overhead projector or OHP"
<b>[28:1 32:2] Changed</b>	"on is" <b>to</b> "on, is"
<b>[28:1 32:2] Changed</b>	"passage." <b>to</b> "passage in ... printer 100."
<b>[28:1 32:2] Changed</b>	"in page " <b>to</b> "in increasing page number"
<b>[28:1 32:2] Changed</b>	"single-side recording " <b>to</b> "single-sided recording mode"
<b>[28:1 32:2] Changed</b>	"double-side recording," <b>to</b> "double-sided recording"

<b>[28:1 32:2] Changed</b>	<b>"recording," to "recording mode,"</b>
<b>[28:1 32:2] Changed</b>	<b>"forming relative" to "forming operation relative"</b>
<b>[28:2 32:3] Changed</b>	<b>"single-side recording " to "single-sided recording mode"</b>
<b>[28:2 32:3] Changed</b>	<b>"recording when" to "recording mode when"</b>
<b>[28:2 32:3] Changed</b>	<b>"appropriate page " to "appropriate ... page number"</b>
<b>[28:3 33:1] Changed</b>	<b>"forming is" to "forming operation is"</b>
<b>[28:3 33:1] Changed</b>	<b>"in the page order." to "in the increasing page number order."</b>
<b>[28:3 33:1] Changed</b>	<b>"P in the page order by" to "P in the increasing page number order by"</b>
<b>[28:4 33:2] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[28:4 33:2] Changed</b>	<b>"inside the" to "inside of the"</b>
<b>[28:4 33:2] Changed</b>	<b>"of the" to "of whether the"</b>
<b>[28:4 33:2] Changed</b>	<b>"35 whether it is" to "35 is"</b>
<b>[29:1 33:3] Changed</b>	<b>"configuration, the" to "configuration, ... thick, the"</b>
<b>[29:1 33:3] Changed</b>	<b>"place the ... sheets to" to "place the ... sheets P at"</b>
<b>[29:1 33:3] Changed</b>	<b>"opening it ... appropriate page " to "first opening ... page number "</b>
<b>[29:1 33:3] Changed</b>	<b>"44 in" to "44, is obtained in"</b>
<b>[29:1 33:3] Changed</b>	<b>"single-side recording " to "single-sided recording mode"</b>
<b>[29:1 33:3] Changed</b>	<b>"double-side recording." to "double-sided recording"</b>
<b>[29:1 33:3] Changed</b>	<b>"recording." to "recording mode."</b>
<b>[29:2 33:4] Changed</b>	<b>"component such" to "component, such"</b>

[29:2 33:4] Changed	"42, as described" to "42, which was described"
[29:3 34:1] Changed	"operation " to "operating "
[29:3 34:1] Changed	"as described " to "as was described ... to FIG. 3"
[29:4 34:2] Changed	"100B according" to "100B, according"
[29:4 34:2] Changed	"invention is explained" to "invention, ... explained"
[29:4 34:2] Changed	"to Fig." to "to FIG."
[29:4 34:2] Changed	"of Fig. " to "of FIG. "
[29:4 34:2] Changed	"10 to separate it away" to "10 away"
[29:4 34:2] Changed	"100 are" to "100, shown in FIG. 2, are"
[29:4 34:2] Changed	"references and " to "reference ... explained again, "
[29:4 34:2] Changed	"discussions focus to " to "discussion ... focused on "
[29:5 34:3] Changed	"in Fig." to "in FIG."
[29:5 34:3] Changed	"stations 5a – 5d from" to "stations 5a-5d from"
[29:5 34:3] Changed	"another to locate" to "another so ... be located"
[29:5 34:3] Changed	"a development" to "a particular development"
[29:5 34:3] Changed	"stations 5a – 5d contain" to "stations 5a-5d contain"
[29:5 34:3] Changed	"moved to locate" to "moved so as to be located"
[29:5 34:3] Changed	"forming in the page " to "forming operation ... page number"
[29:5 34:3] Changed	"of Fig. " to "of FIG. "
[30:1 34:4] Changed	"is separated away" to "is moved away and separated "
[30:1 34:4] Changed	"and overlay the" to "and overlays all three of the"
[30:2 35:1] Changed	"moved to contact " to "moved into contact with"

<b>[31:1 35:2] Changed</b>	"double-side recording," to "double-sided recording"
<b>[31:1 35:2] Changed</b>	"recording," to "recording mode,"
<b>[31:1 35:2] Changed</b>	"intermediate ... drum 1 when" to "intermediate ... drum 1 when"
<b>[31:1 35:2] Changed</b>	"away from" to "away and separated from"
<b>[31:1 35:2] Changed</b>	"to start running " to "in "
<b>[31:1 35:2] Changed</b>	"such that" to "such a manner that"
<b>[31:1 35:2] Changed</b>	"intermediate ... drum 1 and" to "intermediate ... drum 1 and"
<b>[31:1 35:2] Changed</b>	"transported in a" to "transported, while in "
<b>[31:1 35:2] Changed</b>	"10 to" to "10, to"
<b>[31:1 35:2] Changed</b>	"single-side ... recording" to "single-sided ... recording"
<b>[31:1 35:2] Changed</b>	"after " to "occurring ... transferred to "
<b>[31:1 35:2] Changed</b>	"unit are" to "unit 30 are"
<b>[31:1 35:2] Changed</b>	"100." to "100 as shown in FIG. 2."
<b>[31:2 36:1] Changed</b>	"100," to "100 of FIG. 2,"
<b>[31:2 36:1] Changed</b>	"single-side and" to "single-sided and"
<b>[31:2 36:1] Changed</b>	"side recordings " to "sided recording modes "
<b>[31:2 36:1] Changed</b>	"by the paper" to "by, for instance, a paper"
<b>[32:2 37:2] Changed</b>	"apparatus according" to "apparatus, according"
<b>[32:2 37:2] Changed</b>	"invention is" to "invention, is"
<b>[32:2 37:2] Changed</b>	"Figs" to "FIGS"

<b>[32:2 37:2] Changed</b>	"forming apparatus ... 5 includes" to "forming apparatus ... 5 includes"
<b>[32:2 37:2] Changed</b>	"100 of Fig. 2" to "100 of FIG. 2"
<b>[32:2 37:2] Changed</b>	"an ADF (automatic" to "an automatic"
<b>[32:2 37:2] Changed</b>	") " to "or ADF "
<b>[32:2 37:2] Changed</b>	"shown in Fig. 5. The ADF" to "shown in FIG. ... feeder or ADF"
<b>[32:2 37:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[32:2 37:2] Changed</b>	"forming apparatus of Fig. 5 can" to "forming apparatus of FIG. 5 can"
<b>[32:2 37:2] Changed</b>	"including copying" to "including, copying"
<b>[32:2 37:3] Changed</b>	"on. Fig." to "FIG."
<b>[32:2 37:3] Changed</b>	"apparatus of Fig. 5." to "apparatus of FIG. 5."
<b>[32:2 37:3] Changed</b>	"shown in Fig. 6," to "shown in FIG. 6,"
<b>[32:3 37:4] Changed</b>	"performing ... scanning in which" to "performing ... scanning, in which"
<b>[32:3 37:4] Changed</b>	"read while ... moved and" to "read, while ... moved; and"
<b>[32:3 37:4] Changed</b>	"book scanning in which" to "book scanning, in which"
<b>[32:3 37:4] Changed</b>	"62 is greater " to "62 has a greater surface area"
<b>[32:3 37:4] Changed</b>	"than the" to "than that of the"
<b>[32:3 37:4] Changed</b>	"63 and is used" to "63 and the ... 62 is used"
<b>[32:3 37:4] Changed</b>	"and is read in the" to "and read during a"
<b>[32:3 37:4] Changed</b>	"read as" to "read, as"

[32:3 37:4] Changed	"SDF " to "automatic ... feeder or ADF "
[33:1 38:1] Changed	"65 including a" to "65, which includes a"
[33:1 38:1] Changed	"mirrors and" to "mirrors, and"
[33:1 38:1] Changed	"66 including mirrors " to "66, which includes mirrors,"
[33:1 38:1] Changed	"slide in parallel" to "slide parallel"
[33:1 38:1] Changed	"at a half-speed" to "at one half"
[33:1 38:1] Changed	"-" to "of the "
[33:1 38:1] Changed	"Fig" to "FIG"
[33:2 38:2] Changed	"a CCD (charge-coupled" to "a charge-coupled"
[33:2 38:2] Changed	") 68 " to "or CCD 68, "
[33:2 38:2] Changed	"apparatus such" to "apparatus, such"
[33:3 38:3] Changed	"The ADF 250 includes" to "The automatic ... 250 includes"
[33:3 38:3] Changed	"71 on" to "71, on"
[33:3 38:3] Changed	"read are" to "read, are"
[33:3 38:3] Changed	"Fig" to "FIG"
[33:3 38:3] Changed	"73 of the ADF 250 is" to "73 of the ... ADF 250 is"
[33:3 38:3] Changed	"feed " to "feeding "
[33:3 38:3] Changed	"top " to "surface "
[33:3 38:3] Changed	"space between" to "space, between"
[33:3 38:3] Changed	"tray 82 is used" to "tray 82, is used"
[33:3 38:3] Changed	"holds under ... original placed" to "holds an original, placed"



<b>[33:3 38:3] Changed</b>	<b>"62." to "62, under pressure."</b>
<b>[33:3 38:3] Changed</b>	<b>"portion of ... including" to "portion of ... including"</b>
<b>[33:3 38:3] Changed</b>	<b>"plate 70 is tilted upwards" to "plate 70, is tilted upwardly"</b>
<b>[33:3 38:3] Changed</b>	<b>"use the ADF 250" to "use the automatic ... or ADF 250"</b>
<b>[33:3 38:3] Changed</b>	<b>"type. The ADF 250" to "type. The ... or ADF 250"</b>
<b>[33:3 38:3] Changed</b>	<b>"mounted to the" to "mounted on the"</b>
<b>[34:1 39:1] Changed</b>	<b>"page up." to "page facing upwardly."</b>
<b>[34:1 39:1] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[34:1 39:1] Changed</b>	<b>"original fed" to "original, fed"</b>
<b>[34:1 39:1] Changed</b>	<b>"72 is" to "72, is"</b>
<b>[34:1 39:1] Changed</b>	<b>"81 and" to "81, and"</b>
<b>[34:1 39:1] Changed</b>	<b>"B. The original" to "B. Therefore, the original"</b>
<b>[34:1 39:1] Changed</b>	<b>"therefore stack " to "stacked "</b>
<b>[34:1 39:1] Changed</b>	<b>"down" to "facing downwardly"</b>
<b>[35:1 40:2] Changed</b>	<b>"the ADF" to "the automatic ... feeder or ADF"</b>
<b>[35:1 40:2] Changed</b>	<b>"Hereinafter, ... reads a moving" to "Hereinafter, ... reads a moving"</b>
<b>[35:1 40:2] Changed</b>	<b>"type is" to "type, is"</b>
<b>[35:1 40:2] Changed</b>	<b>"and a reading ... stationary" to "and a reading ... stationary"</b>
<b>[35:1 40:2] Changed</b>	<b>"66 is" to "66, is"</b>
<b>[35:2 40:3] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[35:2 40:3] Changed</b>	<b>"presenting " to "representing "</b>

<b>[35:2 40:3] Changed</b>	"sensor 78 ... 250 and the" to "sensor 78 ... 250 and the"
<b>[35:2 40:3] Changed</b>	"read while" to "read, while"
<b>[35:2 40:3] Changed</b>	"by the ADF 250" to "by the automatic ... or ADF 250"
<b>[35:2 40:3] Changed</b>	"sensor 78 ... 250 and a" to "sensor 78 ... 250 and a"
<b>[35:3 41:1] Changed</b>	"original of ... sheet is read," to "original to ... transparent sheet,"
<b>[35:3 41:1] Changed</b>	"is adhered with " to "has "
<b>[35:3 41:1] Changed</b>	"69 on" to "69 adhered on"
<b>[35:3 41:1] Changed</b>	"colored in " to "made so as to be "
<b>[35:3 41:1] Changed</b>	"white." to "white in color."
<b>[36:1 41:2] Changed</b>	"Fig." to "FIG."
<b>[36:1 41:2] Changed</b>	"a sectional-view" to "a cross-sectional"
<b>[36:1 41:2] Changed</b>	"sectional-view" to "cross-sectional view"
<b>[36:1 41:2] Changed</b>	"in Fig. " to "in FIG. "
<b>[36:1 41:2] Changed</b>	"an LED(light-" to "a light "
<b>[36:1 41:2] Changed</b>	") " to "or LED) "
<b>[36:1 41:2] Changed</b>	"closely-" to "close-"
<b>[36:1 41:2] Changed</b>	"that " to ", which "
<b>[36:1 41:2] Changed</b>	"lens may is" to "lens, may be"
<b>[36:2 41:3] Changed</b>	"accordingly the" to "accordingly, the"
<b>[36:2 41:3] Changed</b>	"leads a" to "leads to a"
<b>[36:2 41:3] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[36:2 41:3] Changed</b>	"such an event in that " to "when "

<b>[36:3 41:4] Changed</b>	"including " to ", which includes both "
<b>[36:3 41:4] Changed</b>	"forming occurs" to "forming, occurs"
<b>[36:3 41:4] Changed</b>	"of Fig." to "of FIG."
<b>[36:3 41:4] Changed</b>	"50 of Fig. 6." to "50 of FIG. 6."
<b>[36:4 42:1] Chgd All</b>	"Fig" to "FIG"
<b>[36:4 42:1] Changed</b>	"to the embodiment" to "to an embodiment"
<b>[36:4 42:1] Changed</b>	"have the ADF 250." to "have the automatic ... or ADF 250."
<b>[36:4 42:1] Changed</b>	"the removal ... the pressure" to "the removal ... the pressure"
<b>[36:4 42:1] Changed</b>	"the removal ... the image" to "the removal ... the image"
<b>[36:4 42:1] Changed</b>	"of Fig. 8 " to "of FIG. 8 is"
<b>[36:4 42:1] Changed</b>	"remain " to "the "
<b>[37:1 42:2] Changed</b>	"of Figs." to "of FIGS."
<b>[37:1 42:2] Changed</b>	"8, the page ... recording" to "8, the page ... recording"
<b>[37:1 42:2] Changed</b>	"those " to "the recording sheets P "
<b>[37:1 42:2] Changed</b>	"the image ... and 8 are" to "the image ... and 8 are"
<b>[37:2 43:1] Chgd All</b>	"Fig" to "FIG"
<b>[37:2 43:1] Changed</b>	"Figs" to "FIGS"
<b>[37:2 43:1] Changed</b>	"is of single-sided," to "is single-sided,"
<b>[37:2 43:1] Changed</b>	"number in bracket" to "number, in brackets,"
<b>[37:2 43:1] Changed</b>	"single-side recording," to "single-sided recording"

<b>[37:2 43:1] Changed</b>	"single-side ... abbreviated" to "single-sided ... abbreviated"
<b>[37:2 43:1] Changed</b>	"double-side recording," to "double-sided recording"
<b>[37:2 43:1] Changed</b>	"double-side ... abbreviated" to "double-sided ... abbreviated"
<b>[37:2 43:1] Changed</b>	"D-S is" to "D-S, is"
<b>[38:1 43:2] Changed</b>	"Fig" to "FIG"
<b>[38:1 43:2] Changed</b>	"straight manner" to "straight or forward manner"
<b>[38:1 43:2] Changed</b>	"straight ejection." to "straight or ... ejection."
<b>[38:1 43:2] Changed</b>	"P in order of pages" to "P in increasing ... page numbers"
<b>[38:2 44:1] Changed</b>	"This " to "The "
<b>[38:2 44:1] Changed</b>	"Fig" to "FIG"
<b>[38:2 44:1] Changed</b>	"of the double-side" to "of double-sided"
<b>[38:2 44:1] Changed</b>	"side " to "sided "
<b>[38:2 44:1] Changed</b>	"process and the photoconductive" to "process and ... photoconductive"
<b>[38:3 44:2] Chgd All</b>	"Fig" to "FIG"
<b>[38:3 44:2] Changed</b>	"Figs" to "FIGS"
<b>[38:3 44:2] Changed</b>	"page and so" to "page as so"
<b>[38:4 44:3] Changed</b>	"ejecting " to "where "
<b>[38:4 44:3] Changed</b>	"recording ... the stacker" to "recording ... the stacker"
<b>[38:4 44:3] Changed</b>	"cases ejection ... the ejection" to "cases where ... the ejection"

<b>[39:1 44:4] Changed</b>	"Combination of " to "In combining "
<b>[39:1 44:4] Changed</b>	"above reading ... manner makes" to "above-described ... come up with"
<b>[39:1 44:4] Changed</b>	"single-sided ... sheet scanning" to "single-sided ... sheet scanning"
<b>[39:1 44:4] Changed</b>	"read by the CCD 68 under" to "read by the ... CCD 68 under"
<b>[39:1 44:4] Changed</b>	"of the ADF 250." to "of the automatic ... or ADF 250."
<b>[39:1 44:4] Changed</b>	"double-sided ... sheet scanning" to "double-sided ... sheet scanning"
<b>[39:1 44:4] Changed</b>	"even page" to "even-numbered page"
<b>[39:1 44:4] Changed</b>	"odd page" to "odd-numbered page"
<b>[39:1 44:4] Changed</b>	"read by the CCD 68 with" to "read by the ... CCD 68 with"
<b>[39:1 44:4] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[39:1 44:4] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[39:1 44:4] Changed</b>	"read by the CCD 68 moved" to "read by the ... CCD 68 moved"
<b>[39:3 45:2] Changed</b>	"side " to "sided "
<b>[39:3 45:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[39:3 45:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[39:3 45:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[39:3 45:2] Changed</b>	"read in order ... 1, 2, 3, 4," to "read in order ... 1, 2, 3, 4,"

<b>[39:3 45:2] Changed</b>	"1 in order ... 1, 2, 3, 4," to "1 in order ... 1, 2, 3, 4,"
<b>[39:3 45:2] Changed</b>	"page order." to "page number order."
<b>[40:1 45:4] Changed</b>	"of pages and" to "of page numbers and"
<b>[40:2 46:1] Changed</b>	"pages" to "page numbers"
<b>[40:3 46:2] Changed</b>	"side " to "sided "
<b>[40:3 46:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[40:3 46:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[40:3 46:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[40:3 46:2] Changed</b>	"even and odd pages," to "even-numbered and odd-numbered pages,"
<b>[40:3 46:2] Changed</b>	"78 that" to "78, that"
<b>[40:3 46:2] Changed</b>	"even page locates upstream" to "even-numbered ... located upstream"
<b>[40:3 46:2] Changed</b>	"63 that" to "63, that"
<b>[40:3 46:2] Changed</b>	"odd page locates downstream." to "odd-numbered ... downstream."
<b>[40:3 46:2] Changed</b>	"pages " to "page numbers "
<b>[40:3 46:2] Changed</b>	"therefore no" to "therefore, no"
<b>[41:2 46:4] Changed</b>	"side " to "sided "
<b>[41:2 46:4] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[41:2 46:4] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[41:2 46:4] Changed</b>	"an increasing ... such as 1, 2," to "an increasing ... such as 1, 2,"

<b>[41:2 46:4] Changed</b>	"in increasing ... such as 1, 2," to "in increasing ... such as 1, 2,"
<b>[41:2 46:4] Changed</b>	"1 in order of pages" to "1 in increasing ... page numbers"
<b>[41:4 47:2] Changed</b>	"side " to "sided "
<b>[41:4 47:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[41:4 47:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[41:4 47:2] Changed</b>	"page such" to "page numbers, such"
<b>[41:4 47:2] Changed</b>	"placements " to "placement "
<b>[41:4 47:2] Changed</b>	"of pages such" to "of page numbers, such"
<b>[41:4 47:2] Changed</b>	"of pages 1," to "of page numbers 1,"
<b>[41:4 47:2] Changed</b>	"it read" to "it be read"
<b>[41:4 47:2] Changed</b>	"therefore no" to "therefore, no"
<b>[42:2 48:2] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"
<b>[42:2 48:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[42:2 48:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[42:2 48:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[42:2 48:2] Changed</b>	"pages " to "page numbers "
<b>[42:2 48:2] Changed</b>	"even and odd pages," to "even-numbered and odd-numbered pages,"
<b>[42:2 48:2] Changed</b>	"The double-side recording process" to "The double-sided recording process"

<b>[42:2 48:2] Changed</b>	"An image of ... transferred from the" to "An image of ... transferred from the"
<b>[42:2 48:2] Changed</b>	"the odd page is" to "the odd-numbered page is"
<b>[42:2 48:2] Changed</b>	"The image ... transferred from the" to "The image ... transferred from the"
<b>[43:2 49:1] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"
<b>[43:2 49:1] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[43:2 49:1] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[43:2 49:1] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[43:2 49:1] Changed</b>	"even and odd pages" to "even-numbered and odd-numbered pages,"
<b>[43:2 49:1] Changed</b>	"pages such" to "pages, such"
<b>[43:2 49:1] Changed</b>	"1 in order of pages as" to "1 in a patterned ... page numbers"
<b>[43:2 49:1] Changed</b>	"in the double-side ... mode (i.e.," to "in the double-sided ... mode (i.e.,"
<b>[43:4 49:3] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"
<b>[43:4 49:3] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[43:4 49:3] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[43:4 49:3] Changed</b>	"placements " to "placement "
<b>[43:4 49:3] Changed</b>	"pages " to "page numbers, "



<b>[43:4 49:3] Changed</b>	<b>"1 in order of even " to "1 in a pattern of even-numbered"</b>
<b>[43:4 49:3] Changed</b>	<b>"odd pages," to "odd-numbered pages,"</b>
<b>[43:4 49:3] Changed</b>	<b>"in the double-side ... mode (i.e.," to "in the double-sided ... mode (i.e.,"</b>
<b>[43:4 49:3] Changed</b>	<b>"the double-side recording mode." to "the double-sided recording mode."</b>
<b>[44:2 50:2] Changed</b>	<b>"the double-side recording mode," to "the double-sided recording mode,"</b>
<b>[44:2 50:2] Changed</b>	<b>"sheet by" to "sheet-by-sheet"</b>
<b>[44:2 50:2] Changed</b>	<b>"by sheet" to "sheet-by-sheet"</b>
<b>[44:2 50:2] Changed</b>	<b>"placements " to "placement "</b>
<b>[44:2 50:2] Changed</b>	<b>"of pages such" to "of page numbers, such"</b>
<b>[44:2 50:2] Changed</b>	<b>"it read." to "it be read."</b>
<b>[44:2 50:2] Changed</b>	<b>"recording through the" to "recording via the"</b>
<b>[44:2 50:2] Changed</b>	<b>"1 in order of even " to "1 in a pattern of even-numbered"</b>
<b>[44:2 50:2] Changed</b>	<b>"odd pages" to "odd-numbered pages,"</b>
<b>[44:2 50:2] Changed</b>	<b>"odd pages such as" to "odd-numbered pages, such as"</b>
<b>[44:2 50:2] Changed</b>	<b>"the double-side ... mode through" to "the double-sided recording mode via"</b>
<b>[44:2 50:2] Changed</b>	<b>"generated through the" to "generated via the"</b>
<b>[44:2 50:2] Changed</b>	<b>"recording sheet P" to "recording sheets P"</b>
<b>[45:2 51:2] Changed</b>	<b>"side " to "sided "</b>
<b>[45:2 51:2] Changed</b>	<b>"the ADF" to "the automatic ... feeder or ADF"</b>

<b>[45:2 51:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[45:2 51:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[45:2 51:2] Changed</b>	"of pages 1," to "of page numbers 1,"
<b>[45:2 51:2] Changed</b>	"pages as " to "page numbers "
<b>[45:2 51:2] Changed</b>	"through " to "via "
<b>[45:4 52:1] Changed</b>	"side " to "sided "
<b>[45:4 52:1] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[45:4 52:1] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[45:4 52:1] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[45:4 52:1] Changed</b>	"read in order of even " to "read in a ... even-numbered"
<b>[45:4 52:1] Changed</b>	"odd pages," to "odd-numbered pages,"
<b>[45:4 52:1] Changed</b>	"pages " to "page numbers "
<b>[45:4 52:1] Changed</b>	"therefore no" to "therefore, no"
<b>[46:2 52:3] Changed</b>	"side " to "sided "
<b>[46:2 52:3] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[46:2 52:3] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[46:2 52:3] Changed</b>	"an increasing ... such as 1, 2," to "an increasing ... such as 1, 2,"
<b>[46:2 52:3] Changed</b>	"placements " to "placement "
<b>[46:2 52:3] Changed</b>	"in increasing ... such as 1, 2," to "in increasing ... such as 1, 2,"
<b>[46:2 52:3] Changed</b>	"1 in order of pages" to "1 in increasing ... page numbers"
<b>[47:2 53:2] Changed</b>	"side " to "sided "

[47:2 53:2] Changed	"sheet by" to "sheet-by-sheet"
[47:2 53:2] Changed	"by sheet" to "sheet-by-sheet"
[47:2 53:2] Changed	"page such" to "page numbers, such"
[47:2 53:2] Changed	"placements " to "placement "
[47:2 53:2] Changed	"of pages such" to "of page numbers, such"
[47:2 53:2] Changed	"1 in order of pages" to "1 in increasing ... page numbers"
[47:2 53:2] Changed	"it read" to "it be read"
[47:2 53:2] Changed	"therefore no" to "therefore, no"
[47:2 53:2] Changed	"through " to "via "
[47:4 54:2] Changed	"double-side recording" to "double-sided recording"
[47:4 54:2] Changed	"the ADF" to "the automatic ... feeder or ADF"
[47:4 54:2] Changed	"sheet by" to "sheet-by-sheet"
[47:4 54:2] Changed	"by sheet" to "sheet-by-sheet"
[47:4 54:2] Changed	"order of pages ... and so on. " to "increasing ... and so on. "
[47:4 54:2] Changed	"single-side recording " to "single-sided ... operation"
[47:4 54:2] Changed	"odd page" to "odd-numbered page"
[47:4 54:2] Changed	"even page" to "even-numbered page"
[48:2 54:4] Changed	"the double-side recording mode," to "the double-sided recording mode,"
[48:2 54:4] Changed	"the ADF" to "the automatic ... feeder or ADF"
[48:2 54:4] Changed	"sheet by" to "sheet-by-sheet"
[48:2 54:4] Changed	"by sheet" to "sheet-by-sheet"

<b>[48:2 54:4] Changed</b>	"read in order of even " to "read in a ... even-numbered"
<b>[48:2 54:4] Changed</b>	"odd pages" to "odd-numbered pages,"
<b>[48:2 54:4] Changed</b>	"odd pages such as" to "odd-numbered pages, such as"
<b>[48:2 54:4] Changed</b>	"1 in order of pages" to "1 in increasing ... page numbers,"
<b>[48:2 54:4] Changed</b>	"on in the ... recording mode" to "on, in the ... recording mode"
<b>[48:2 54:4] Changed</b>	"through " to "via "
<b>[49:2 55:2] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"
<b>[49:2 55:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[49:2 55:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[49:2 55:2] Chgd All</b>	"pages" to "page numbers"
<b>[49:2 55:2] Changed</b>	"placements " to "placement "
<b>[49:2 55:2] Changed</b>	"of pages such" to "of page numbers, such"
<b>[49:2 55:2] Changed</b>	"1 in order of pages as" to "1 in increasing ... page numbers"
<b>[49:2 55:2] Changed</b>	"read such" to "read, such"
<b>[49:2 55:2] Changed</b>	"on in the ... recording mode" to "on, in the ... recording mode"
<b>[49:2 55:2] Changed</b>	"the double-side recording mode." to "the double-sided recording mode."
<b>[49:4 56:2] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"

<b>[49:4 56:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[49:4 56:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[49:4 56:2] Changed</b>	"of pages from" to "of page numbers from"
<b>[49:4 56:2] Changed</b>	"placements " to "placement "
<b>[49:4 56:2] Changed</b>	"of pages such" to "of page numbers, such"
<b>[49:4 56:2] Changed</b>	"it read." to "it be read."
<b>[49:4 56:2] Changed</b>	"recording through the" to "recording via the"
<b>[49:4 56:2] Changed</b>	"1 in order of pages" to "1 in increasing ... page numbers"
<b>[49:4 56:2] Changed</b>	"in the double-side ... mode (i.e.," to "in the double-sided ... mode (i.e.,"
<b>[49:4 56:2] Changed</b>	"single-side recording" to "single-sided recording"
<b>[49:4 56:2] Changed</b>	"recording sheet P" to "recording sheetd P"
<b>[50:2 57:2] Changed</b>	"of Fig." to "of FIG."
<b>[50:2 57:2] Changed</b>	"table of Fig. 9" to "table of FIG. 9"
<b>[51:1 57:4] Changed</b>	"double-side ... recording" to "double-sided ... recording"
<b>[51:2 57:5] Changed</b>	"Fig" to "FIG"
<b>[51:2 57:5] Changed</b>	"a " to "an amount of "
<b>[51:3 57:6] Changed</b>	"Fig" to "FIG"
<b>[51:3 57:6] Changed</b>	"are needed " to "need "
<b>[51:3 57:6] Changed</b>	"small " to "smaller than "
<b>[51:3 57:6] Changed</b>	"case of an ... that reads" to "case where an apparatus reads"
<b>[51:4 58:1] Changed</b>	"Fig" to "FIG"

<b>[51:4 58:1] Changed</b>	<b>"a control of " to "controlling the "</b>
<b>[51:4 58:1] Changed</b>	<b>"optical " to "optimal "</b>
<b>[51:4 58:1] Changed</b>	<b>"with the mode" to "with whatever mode"</b>
<b>[51:4 58:1] Changed</b>	<b>"such as the ... recording and " to "is chosen, ... whatever "</b>
<b>[51:4 58:1] Changed</b>	<b>"such as a " to ", i.e., "</b>
<b>[51:4 58:1] Changed</b>	<b>"thick or" to "thick recording sheet or"</b>
<b>[51:4 58:1] Changed</b>	<b>"the double-side recording requires" to "the double-sided ... mode requires"</b>
<b>[51:4 58:1] Changed</b>	<b>"single-side recording." to "single-sided recording"</b>
<b>[51:4 58:1] Changed</b>	<b>"recording." to "recording mode."</b>
<b>[51:4 58:1] Changed</b>	<b>"the single-side recording mode," to "the single-sided recording mode,"</b>
<b>[51:4 58:1] Changed</b>	<b>"roller at" to "roller, at"</b>
<b>[51:4 58:1] Changed</b>	<b>"image may" to "image, may"</b>
<b>[52:1 58:2] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[52:1 58:2] Changed</b>	<b>"of temperature to" to "of heat to"</b>
<b>[52:1 58:2] Changed</b>	<b>"for transferring " to "while "</b>
<b>[52:1 58:2] Changed</b>	<b>"toner image from" to "toner images are transferred from"</b>
<b>[52:2 58:3] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[52:2 58:3] Changed</b>	<b>"happens" to "from happening"</b>
<b>[52:3 59:1] Chgd All</b>	<b>"Fig" to "FIG"</b>

<b>[52:3 59:1] Changed</b>	"forming system includes the" <b>to</b> "forming system ... includes the"
<b>[52:3 59:1] Changed</b>	"of Fig. 5 added with" <b>to</b> "of FIG. 5 and"
<b>[52:3 59:1] Changed</b>	"a side of ... 250 and over" <b>to</b> "a side of ... 250 and over"
<b>[52:3 59:1] Changed</b>	"another side ... 250 and over" <b>to</b> "another side ... 250 and over"
<b>[52:3 59:1] Changed</b>	"bins each for receiving" <b>to</b> "bins which each receive"
<b>[52:3 59:1] Changed</b>	"in page " <b>to</b> "in increasing page number"
<b>[53:1 59:2] Changed</b>	"provided to an" <b>to</b> "provided on an"
<b>[53:1 59:2] Changed</b>	"ways to guide " <b>to</b> "paths for guiding "
<b>[53:1 59:2] Changed</b>	"P to the stacker" <b>to</b> "P to either the stacker"
<b>[53:2 59:3] Changed</b>	"P ejected" <b>to</b> "P, ejected"
<b>[53:2 59:3] Changed</b>	"32 to" <b>to</b> "32, to"
<b>[53:2 59:3] Changed</b>	"ways to guide " <b>to</b> "paths for guiding "
<b>[53:2 59:3] Changed</b>	"P to the ejection" <b>to</b> "P to either the ejection"
<b>[53:3 60:1] Changed</b>	"handling shown" <b>to</b> "handling, shown"
<b>[53:3 60:1] Changed</b>	"Fig. " <b>to</b> "FIG. "
<b>[53:3 60:1] Changed</b>	"9 can" <b>to</b> "9, can"
<b>[53:4 60:2] Changed</b>	"handling shown" <b>to</b> "handling, shown"
<b>[53:4 60:2] Changed</b>	"Fig. " <b>to</b> "FIG. "
<b>[53:4 60:2] Changed</b>	"9 can" <b>to</b> "9, can"
<b>[53:5 60:3] Changed</b>	"As an alternative system" <b>to</b> "Alternatively"
<b>[53:5 60:3] Changed</b>	"system of the" <b>to</b> "system having the"

[53:5 60:3] Changed	"100 of Fig. 2 with " to "100, of FIG. 2, with the"
[54:1 60:4] Changed	"apparatus ... embodiment" to "apparatus, ... embodiment"
[54:1 60:4] Changed	"invention is" to "invention, is"
[54:1 60:4] Chgd All	"Fig" to "FIG"
[54:1 60:4] Changed	"apparatus ... 11 includes" to "apparatus, ... 11, includes"
[54:1 60:4] Changed	"100C, the ... 200B, an ADF (" to "100C, a scanner 200B, and an "
[54:1 60:4] Changed	") " to "or ADF "
[54:1 60:4] Changed	"except for a fixing" to "except for having a fixing"
[54:1 60:4] Changed	"30B which" to "30B, which"
[54:1 60:4] Changed	"that " to "the scanner 200 "
[54:1 60:4] Changed	"The ADF" to "The automatic ... feeder or ADF"
[54:2 61:1] Changed	"Fig" to "FIG"
[54:2 61:1] Changed	"P having" to "P, having"
[54:2 61:1] Changed	"thereon is" to "thereon, is"
[54:2 61:1] Changed	"thereby " to ", "
[54:2 61:1] Changed	"Although " to "Since "
[54:2 61:1] Changed	"is arranged not inside but " to "is not arranged ... but rather"
[54:2 61:1] Changed	"outside the" to "outside of the"
[54:2 61:1] Changed	"30B is close" to "30B be close"
[54:2 61:1] Changed	"under the ... of which " to "so that "
[54:2 61:1] Changed	"may be " to "is not "



[54:4 61:3] Changed	"The ADF" to "The automatic ... feeder or ADF"
[54:4 61:3] Changed	"72 and" to "72, and"
[54:4 61:3] Changed	"having " to ", which includes all of "
[54:4 61:3] Changed	"Fig. 5." to "the automatic ... of FIG. 5."
[54:5 61:4] Changed	"The ADF 250 " to "The automatic ... ADF 250B "
[54:5 61:4] Changed	"of the ADF 250B" to "of the automatic ... or ADF 250B"
[54:5 61:4] Changed	"is extended " to "extends, "
[54:5 61:4] Changed	"pressure between" to "pressure, between"
[54:5 61:4] Changed	"exchanged to each" to "exchanged with each"
[54:5 61:4] Changed	"pressing roller 93" to "pressing rollers 93"
[54:5 61:4] Changed	"62b when the ADF" to "62b, when ... feeder or ADF"
[54:5 61:4] Changed	"state to" to "state, to"
[55:1 62:1] Changed	"The ADF" to "The A\automatic ... feeder or ADF"
[55:1 62:1] Changed	"actuator such" to "actuator (not shown), such"
[55:1 62:1] Changed	"solenoid (not shown)," to "solenoid,"
[55:2 62:2] Changed	"the ADF" to "the automatic ... feeder or ADF"
[55:2 62:2] Changed	"structured in " to "having "
[55:2 62:2] Changed	"the way as described above" to "the above-described structure"
[55:2 62:2] Changed	"200 in the way " to "200B in a ... scanner 200 "
[55:2 62:2] Changed	"Fig" to "FIG"
[55:2 62:2] Changed	"side is read." to "side can be read."
[55:3 62:3] Changed	"the ADF" to "the automatic ... feeder or ADF"

<b>[55:4 62:4] Changed</b>	"thereof is pressed" to "thereof pressed"
<b>[55:4 62:4] Changed</b>	"Fig" to "FIG"
<b>[55:4 62:4] Changed</b>	"consequently the" to "consequently, the"
<b>[55:4 62:4] Changed</b>	"the originals " to "the sheet-formed originals S"
<b>[55:4 62:4] Changed</b>	"sheet by" to "sheet-by-sheet."
<b>[55:4 62:4] Changed</b>	"by sheet. The original " to "sheet-by-sheet. ... original S"
<b>[55:4 62:4] Changed</b>	"remove paper" to "remove a paper"
<b>[56:1 63:1] Changed</b>	"C1, the original is" to "C1, the sheet-formed original S is"
<b>[56:1 63:1] Changed</b>	"locate the original at" to "locate the ... original S at"
<b>[56:1 63:1] Changed</b>	"of the original is" to "of the sheet-formed original S is"
<b>[56:1 63:1] Changed</b>	"64 (Fig." to "64 (as discussed ... respect to FIG."
<b>[56:1 63:1] Changed</b>	"66 (Fig. " to "66 (as discussed ... respect to FIG. "
<b>[56:1 63:1] Changed</b>	"C " to "C2 "
<b>[56:1 63:1] Changed</b>	"transfer the original to" to "transfer the ... original S to"
<b>[56:2 63:2] Changed</b>	"The original " to "The sheet-formed original S"
<b>[56:2 63:2] Changed</b>	"96 which is" to "96, which was"
<b>[56:2 63:2] Changed</b>	"an upward ... original " to "the upwardly-directed ... original S "
<b>[56:2 63:2] Changed</b>	"transfer the original to" to "transfer the ... original S to"
<b>[56:2 63:2] Changed</b>	"of the original is" to "of the sheet-formed original S is"
<b>[56:2 63:2] Changed</b>	"indicated ... direction " to ", indicated ... of arrow "
<b>[56:2 63:2] Changed</b>	"Thereby, the original is" to "Thereby, the ... original S is"
<b>[56:2 63:2] Changed</b>	"of originals " to "of the sheet-formed originals S"

<b>[56:2 63:2] Changed</b>	<b>"pages " to "page numbers "</b>
<b>[57:1 64:1] Changed</b>	<b>"in " to "to have "</b>
<b>[57:1 64:1] Changed</b>	<b>"the original " to "the sheet-formed original S"</b>
<b>[57:2 64:2] Changed</b>	<b>"of Fig." to "of FIG."</b>
<b>[57:2 64:2] Changed</b>	<b>"the figure of Fig. 11; " to "FIG. 11 by "</b>
<b>[57:2 64:2] Changed</b>	<b>"of originals" to "of sheet-formed originals"</b>
<b>[57:2 64:2] Changed</b>	<b>"read originals" to "read sheet-formed originals"</b>
<b>[57:3 64:3] Changed</b>	<b>"Fig. 11 structured ... rules of the " to "FIG. 11, having ... rules of "</b>
<b>[57:3 64:3] Changed</b>	<b>"table of Fig. 9." to "table of FIG. 9."</b>
<b>[57:3 64:3] Changed</b>	<b>"the originals " to "the sheet-formed originals S"</b>
<b>[57:4 64:4] Changed</b>	<b>"double-side ... recording" to "double-sided ... recording"</b>
<b>[57:5 65:1] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[57:6 65:2] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[57:6 65:2] Changed</b>	<b>"are needed to " to "must "</b>
<b>[57:6 65:2] Changed</b>	<b>"far small " to "a far smaller ... be stored "</b>
<b>[58:1 65:3] Changed</b>	<b>"apparatus ... embodiment" to "apparatus, ... embodiment"</b>
<b>[58:1 65:3] Changed</b>	<b>"invention is" to "invention, is"</b>
<b>[58:1 65:3] Changed</b>	<b>"to Fig." to "to FIG."</b>
<b>[58:1 65:3] Changed</b>	<b>"image forming ... 12 includes" to "image forming ... 12, includes"</b>
<b>[58:1 65:3] Changed</b>	<b>"100B of Fig. 4, the" to "100B, of FIG. 4, and both the"</b>
<b>[58:1 65:3] Changed</b>	<b>"200 of Fig. ... 250 of Fig" to "200 and the ... 250, of FIG"</b>

<b>[58:1 65:3] Changed</b>	"image forming ... Fig. 12 is" <b>to</b> "image forming ... FIG. 12, is"
<b>[58:2 65:4] Changed</b>	"image forming ... basically" <b>to</b> "image forming ... basically"
<b>[58:2 65:4] Changed</b>	"forming apparatus of Fig. 5 does," <b>to</b> "forming apparatus of FIG. 5 does,"
<b>[58:2 65:4] Changed</b>	"apparatus of Fig. 12," <b>to</b> "apparatus of FIG. 12,"
<b>[58:2 65:4] Changed</b>	"apparatus of Fig. 5," <b>to</b> "apparatus of FIG. 5,"
<b>[58:2 65:4] Changed</b>	"forming apparatus of Fig. 12 and" <b>to</b> "forming apparatus of FIG. 12 and"
<b>[58:2 65:4] Changed</b>	"apparatus of Fig. 5." <b>to</b> "apparatus of FIG. 5."
<b>[58:3 66:1] Changed</b>	"R2 configured" <b>to</b> "R2 is configured"
<b>[58:3 66:1] Changed</b>	"separation " <b>to</b> "separate "
<b>[58:3 66:1] Changed</b>	"convert " <b>to</b> "converting "
<b>[58:3 66:1] Changed</b>	"mechanism includes" <b>to</b> "mechanism ... R2 includes"
<b>[58:3 66:1] Changed</b>	"generates " <b>to</b> "to generate "
<b>[58:3 66:1] Changed</b>	"Yellow " <b>to</b> "yellow "
<b>[59:1 66:2] Changed</b>	"and output" <b>to</b> "and then output"
<b>[59:1 66:2] Changed</b>	"colors." <b>to</b> "colors black ... yellow (Y)."
<b>[59:1 66:2] Changed</b>	"one to another " <b>to</b> "on top of each other "
<b>[59:1 66:2] Changed</b>	"Fig" <b>to</b> "FIG"
<b>[59:2 67:1] Changed</b>	"of Fig. 12 " <b>to</b> "of FIG. 12,"
<b>[59:2 67:1] Changed</b>	"is applied with " <b>to</b> ", works according to "

<b>[59:2 67:1] Changed</b>	<b>"of the sheet" to "of sheet"</b>
<b>[59:2 67:1] Changed</b>	<b>"table of Fig. 9." to "table of FIG. 9."</b>
<b>[59:3 67:2] Changed</b>	<b>"double-side ... recording" to "double-sided ... recording"</b>
<b>[59:4 67:3] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[60:1 67:4] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[60:1 67:4] Changed</b>	<b>"are needed " to "need "</b>
<b>[60:1 67:4] Changed</b>	<b>"far small " to "a far smaller ... stored than "</b>
<b>[60:2 67:5] Changed</b>	<b>"of Fig." to "of FIG."</b>
<b>[60:2 67:5] Changed</b>	<b>"100B of Fig. 5," to "100B of FIG. 5,"</b>
<b>[60:2 67:5] Changed</b>	<b>"reverse" to "reversely"</b>
<b>[60:2 67:5] Changed</b>	<b>"10 is configured" to "10 are configured"</b>
<b>[60:2 67:5] Changed</b>	<b>"with " to "each other "</b>
<b>[60:4 68:2] Changed</b>	<b>"present application are" to "present invention are"</b>
<b>[60:5 69:1] Del Paras</b>	<b>"This application ... ABSTRACT"</b>
<b>[84:2 69:1] Add Paras</b>	<b>"What is claimed ... OF THE DISCLOSUR"</b>
<b>[84:2 70:2] Changed</b>	<b>"first ejection ... sheets in" to "first ejection ... sheets in"</b>
<b>[84:2 70:2] Changed</b>	<b>"straight orientation" to "straight or ... orientation,"</b>
<b>[84:2 70:2] Changed</b>	<b>"orientation and" to "orientation, and"</b>
<b>[84:2 70:2] Changed</b>	<b>"second ejection ... sheets in" to "second ejection ... sheets in"</b>
<b>[84:2 70:2] Changed</b>	<b>"surface " to "first and ... surfaces "</b>
<b>[84:2 70:2] Changed</b>	<b>"side " to "sided "</b>
<b>[84:2 70:2] Changed</b>	<b>"pages" to "page numbers"</b>

**[85:1 70:3] Changed** "I:\atty\gas\211790US\211790 orig spec.wpd" to  
"I:\atty\gas\211790\Sub Spec.wpd"

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[15: 15: 15: ]

[16: 16: 16: ]

[16: 16: 16: ]

[16: 16: 16: ]

[16: 16: 16: ]

[16: 16: 16: ]

[16: 16: 16: ]

[16: 16: 16: ]

[16: 16: 16: ]

way, performs"

both the first and second surfaces"

"

"be formed first"

"be formed second"

"

referred to as" to "first image ... referred to

"

se

face, on"

referred to as" to "second image ...

"

"

light, from"

"

"

to "the sake of convenience,"

to "convenience,"

to "toner, remaining"

to "drum 1, is removed"

"

to "controlled ... to be kept"

or " to ". In other ... or else, "



[18:3 21:3] Changed	"and therefore " to "so that "
[18:3 21:3] Changed	"images are kept" to "images can be kept"
[18:3 21:3] Changed	"desirable conditions " to "a desirably fixed state, "
[19:1 22:2] Changed	"stacking in page order" to "stacking in ... number order"
[19:1 22:2] Changed	"image is needed ... generated " to "image needs ... generated first"
[19:1 22:2] Changed	"image generated afterwards is" to "image needs ... and then,"
[19:1 22:2] Changed	"More specifically" to "In other words"
[19:1 22:2] Changed	"order is needed to" to "order needs to"
[19:1 22:2] Changed	"page has" to "page number has"
[19:1 22:2] Changed	"image," to "image thereon,"
[19:1 22:2] Changed	"image of the" to "image, on the"
[19:1 22:2] Changed	"page is" to "page number, is"
[19:1 22:2] Changed	"the image ... numbers is" to "the page numbers ... operation is"
[19:1 22:2] Changed	";" to ":"
[19:2 22:3] Changed	"2 _ 1 _ ... _ _E_E_E_E" to "2 → 1 → 4 ... 5 → ..."
[19:3 22:4] Changed	"the recording" to "the sheet ... recording"
[19:3 22:4] Changed	"in sheet numbers is expressed as;" to "is as follows:"
[19:4 23:1] Changed	"sheet _ 2nd sheet _ 3rd" to "sheet → 2nd sheet → 3rd"
[19:4 23:1] Changed	"_ _E_E_E_E" to "→ ..."
[19:5 23:2] Changed	"forming is" to "forming operation is"

<b>[20:1 23:4] Changed</b>	"It is needed to be" <b>to</b> "It must be"
<b>[20:1 23:4] Changed</b>	"odd page" <b>to</b> "odd-numbered page"
<b>[20:1 23:4] Changed</b>	"image," <b>to</b> "image thereon,"
<b>[20:1 23:4] Changed</b>	"is first generated " <b>to</b> "is generated first"
<b>[20:1 23:4] Changed</b>	"even page" <b>to</b> "even-numbered page"
<b>[20:1 23:4] Changed</b>	"generated so" <b>to</b> "generated afterwards so"
<b>[20:1 23:4] Changed</b>	"the image ... numbers is" <b>to</b> "the page numbers ... forming is"
<b>[20:1 23:4] Changed</b>	";" <b>to</b> ":"
<b>[20:2 24:1] Changed</b>	"1 _ 2 _ ... _ _E_E_E_E" <b>to</b> "1 → 2 → 3 ... 6 → ..."
<b>[20:3 24:2] Changed</b>	"the recording" <b>to</b> "the sheet ... recording"
<b>[20:3 24:2] Changed</b>	"in sheet numbers is expressed as;" <b>to</b> "is as follows:"
<b>[21:1 24:3] Changed</b>	"sheet _ 2nd sheet _ 3rd" <b>to</b> "sheet → 2nd sheet → 3rd"
<b>[21:1 24:3] Changed</b>	"_ _E_E_E_E" <b>to</b> "→ ... "
<b>[21:3 24:5] Changed</b>	"In any case, either " <b>to</b> "In either case of"
<b>[21:3 24:5] Changed</b>	"44, the image ... increasing" <b>to</b> "44, the image ... increasing"
<b>[21:3 24:5] Changed</b>	"find a sheet to see" <b>to</b> "find any sheet"
<b>[21:3 24:5] Changed</b>	"if the image ... performed in a" <b>to</b> "if the image ... performed in a"
<b>[21:3 24:5] Changed</b>	"by seeing, particularly," <b>to</b> "by particularly"
<b>[21:3 24:5] Changed</b>	"particularly, the" <b>to</b> "particularly reviewing the"
<b>[21:3 24:5] Changed</b>	"or first" <b>to</b> "or the first"

<b>[21:3 24:5] Changed</b>	"When the image ... decreasing" to "When the image ... decreasing"
<b>[21:3 24:5] Changed</b>	"that is" to "i.e."
<b>[21:3 24:5] Changed</b>	"is first output," to "is output"
<b>[21:3 24:5] Changed</b>	"output," to "output first,"
<b>[21:3 24:5] Changed</b>	"first page is output." to "first page ... is output."
<b>[21:4 24:6] Changed</b>	"addition, ... performed" to "addition, ... performed"
<b>[21:4 24:6] Changed</b>	"facilitates " to ", the "
<b>[21:4 24:6] Changed</b>	"at an occurrence of " to "is facilitated when "
<b>[21:4 24:6] Changed</b>	"jam in" to "jam occurs in"
<b>[21:4 24:6] Changed</b>	"eliminating conditions of" to "eliminating ... leading to"
<b>[21:4 24:6] Changed</b>	"forming from" to "forming operation from"
<b>[21:4 24:6] Changed</b>	"included in " to "including "
<b>[21:5 25:1] Changed</b>	"100, the" to "100, during ... mode, the"
<b>[21:5 25:1] Changed</b>	"can select ... either the" to "can select either the"
<b>[21:5 25:1] Changed</b>	"through " to "via "
<b>[21:5 25:1] Changed</b>	"(Fig. 3), ... select in the " to "(to be explained ... During a "
<b>[21:5 25:1] Changed</b>	"recording mode either one" to "recording ... either one"
<b>[21:5 25:1] Changed</b>	"forming is controlled to" to "forming operation is controlled so as to"
<b>[21:5 25:1] Changed</b>	"so that " to "and thus, "
<b>[21:5 25:1] Changed</b>	"sheets are" to "sheets P are"

[24:2 28:1] Changed "top when" to "top of the stack when"

[24:2 28:1] Changed "of the image ... page numbers" to "of the page ... operation"

[24:2 28:1] Changed ";" to ":"

[24:3 28:2] Changed " $1 \_ 2 \_ \dots \_ \_ E\_E\_E\_E$ " to " $1 \rightarrow 2 \rightarrow 3 \dots 6 \rightarrow \dots$ "

[24:4 28:3] Changed "the recording" to "the sheet ... recording"

[24:4 28:3] Changed "in sheet numbers in this" to "in this"

[24:4 28:3] Changed "expressed as;" to "as follows:"

[25:1 28:4] Changed "sheet  $\_$  2nd sheet  $\_$  3rd" to "sheet  $\rightarrow$  2nd sheet  $\rightarrow$  3rd"

[25:1 28:4] Changed " $\_ \_ E\_E\_E\_E$ " to " $\rightarrow \dots$ "

[25:2 28:5] Changed "image formed" to "image, formed"

[25:2 28:5] Changed "1 is" to "1, is"

[25:2 28:5] Changed "belt." to "belt 10."

[25:2 28:5] Changed "position between" to "position, between"

[25:2 28:5] Changed "10 in" to "10, in"

[25:2 28:5] Changed "Then, the ... intermediate transfer" to "Then, the ... intermediate transfer".

[25:2 28:5] Changed "10 is" to "10, is"

[25:2 28:5] Changed "direction A2" to "direction of the arrow A2"

[25:2 28:5] Changed "number " to "order "

[25:2 28:5] Changed "of sheet numbers." to "of page numbers."

[25:2 28:5] Changed "forming is" to "forming operation is"

[25:2 28:5] Changed "numbers from the" to "numbers starting with the"

<b>[25:2 28:5] Changed</b>	"plurality ... recording sheet P" to "plurality of recording sheets P"
<b>[25:2 28:5] Changed</b>	"numbers with" to "numbers starting with"
<b>[25:2 28:5] Changed</b>	"its " to "the "
<b>[25:2 28:5] Changed</b>	"top when" to "top of the stack when"
<b>[25:2 28:5] Changed</b>	"the image ... numbers is" to "the page numbers ... operation is"
<b>[25:2 28:5] Changed</b>	";" to ":"
<b>[25:3 29:1] Changed</b>	"1 _ 2 _ ... _ _E_E_E_E" to "1 → 2 → 3 ... 6 → ..."
<b>[25:4 29:2] Changed</b>	"the recording" to "the sheet ... recording"
<b>[25:4 29:2] Changed</b>	"in sheet numbers is expressed as;" to "is as follows:"
<b>[25:5 29:3] Changed</b>	"sheet _ 2nd sheet _ 3rd" to "sheet → 2nd sheet → 3rd"
<b>[25:5 29:3] Changed</b>	"_ _E_E_E_E" to "→ ... "
<b>[25:6 29:4] Changed</b>	"side " to "sided "
<b>[25:6 29:4] Changed</b>	"recording," to "recording operation,"
<b>[25:6 29:4] Changed</b>	"the image" to "the page numbers in the image"
<b>[25:6 29:4] Changed</b>	"in page numbers " to "operation "
<b>[25:6 29:4] Changed</b>	"a " to "the only "
<b>[26:1 29:5] Changed</b>	"the user can select in " to "when using "
<b>[26:1 29:5] Changed</b>	"the single-side recording mode" to "the single-sided recording mode,"
<b>[26:1 29:5] Changed</b>	"recording mode either the" to "recording ... either the"
<b>[26:1 29:5] Changed</b>	"through " to "via "

<b>[26:1 29:5] Changed</b>	"(Fig. 3), ... recording mode " <b>to</b> "(to be explained ... may select "
<b>[26:1 29:5] Changed</b>	"44, the" <b>to</b> "44, and then, the"
<b>[26:1 29:5] Changed</b>	"forming is" <b>to</b> "forming operation is"
<b>[26:1 29:5] Changed</b>	"forming." <b>to</b> "forming operation."
<b>[26:1 29:5] Changed</b>	"double-side recording " <b>to</b> "double-sided ... operation"
<b>[26:1 29:5] Changed</b>	"perform complex operations" <b>to</b> "perform any complex tasks"
<b>[26:2 30:1] Changed</b>	"the single-side recording mode," <b>to</b> "the single-sided recording mode,"
<b>[26:2 30:1] Changed</b>	"including " <b>to</b> ", such as "
<b>[26:2 30:1] Changed</b>	"through the straight passage." <b>to</b> "through a ... printer 100."
<b>[26:2 30:1] Changed</b>	"in the single-side" <b>to</b> "in a single-sided"
<b>[26:2 30:1] Changed</b>	"the single-side recording and" <b>to</b> "a single-sided ... operation and"
<b>[26:2 30:1] Changed</b>	"page order," <b>to</b> "page number order,"
<b>[26:2 30:1] Changed</b>	"running " <b>to</b> "being run "
<b>[26:2 30:1] Changed</b>	"the passage." <b>to</b> "the passage ... printer 100."
<b>[26:3 30:2] Changed</b>	"in the increasing" <b>to</b> "in an increasing"
<b>[26:3 30:2] Changed</b>	"numbers such" <b>to</b> "numbers, such"
<b>[26:3 30:2] Changed</b>	"in both cases ... recordings" <b>to</b> ", in both ... operation"
<b>[26:3 30:2] Changed</b>	"forming is" <b>to</b> "forming operation is"

<b>[26:3 30:2] Changed</b>	<b>"addition, ... the user can" to "addition, ... the user can"</b>
<b>[26:3 30:2] Changed</b>	<b>"upon occurrence" to "upon the occurrence"</b>
<b>[26:3 30:2] Changed</b>	<b>"error of the paper" to "error, such as a paper"</b>
<b>[27:1 31:1] Changed</b>	<b>"Fig." to "FIG."</b>
<b>[27:1 31:1] Changed</b>	<b>"provided to the" to "provided on the"</b>
<b>[27:1 31:1] Changed</b>	<b>"in Fig. " to "in FIG. "</b>
<b>[27:1 31:1] Changed</b>	<b>"a LCD (liquid" to "a liquid"</b>
<b>[27:1 31:1] Changed</b>	<b>"display) 51" to "display or LCD 51"</b>
<b>[27:1 31:1] Changed</b>	<b>"the condition of the printer" to "the printer"</b>
<b>[27:1 31:1] Changed</b>	<b>"between online " to "between being ... condition"</b>
<b>[27:1 31:1] Changed</b>	<b>"and offline." to "and an offline"</b>
<b>[27:1 31:1] Changed</b>	<b>"offline." to "offline condition."</b>
<b>[27:1 31:1] Changed</b>	<b>"resets the present" to "resets present"</b>
<b>[27:1 31:1] Changed</b>	<b>"designates ... recording" to "designates ... recording"</b>
<b>[27:1 31:1] Changed</b>	<b>"P." to "P to be used."</b>
<b>[27:1 31:1] Changed</b>	<b>"sheet such" to "sheet, such"</b>
<b>[27:1 31:1] Changed</b>	<b>"A double-side recording button" to "A double-sided recording button"</b>
<b>[27:1 31:1] Changed</b>	<b>"the double-side recording mode" to "the double-sided recording mode"</b>
<b>[27:1 31:1] Changed</b>	<b>"58 having ... triangle mark" to "58, being ... triangular mark,"</b>
<b>[27:1 31:1] Changed</b>	<b>"mark scrolls upwards" to "mark, scrolls "</b>

[28:1 32:2] Changed	"recording," to "recording mode,"
[28:1 32:2] Changed	"forming relative" to "forming operation relative"
[28:2 32:3] Changed	"single-side recording " to "single-sided recording mode"
[28:2 32:3] Changed	"recording when" to "recording mode when"
[28:2 32:3] Changed	"appropriate page " to "appropriate ... page number"
[28:3 33:1] Changed	"forming is" to "forming operation is"
[28:3 33:1] Changed	"in the page order." to "in the increasing page number order."
[28:3 33:1] Changed	"P in the page order by" to "P in the increasing page number order by"
[28:4 33:2] Changed	"Fig" to "FIG"
[28:4 33:2] Changed	"inside the" to "inside of the"
[28:4 33:2] Changed	"of the" to "of whether the"
[28:4 33:2] Changed	"35 whether it is" to "35 is"
[29:1 33:3] Changed	"configuration, the" to "configuration, ... thick, the"
[29:1 33:3] Changed	"place the ... sheets to" to "place the ... sheets P at"
[29:1 33:3] Changed	"opening it ... appropriate page " to "first opening ... page number "
[29:1 33:3] Changed	"44 in" to "44, is obtained in"
[29:1 33:3] Changed	"single-side recording " to "single-sided recording mode"
[29:1 33:3] Changed	"double-side recording." to "double-sided recording"
[29:1 33:3] Changed	"recording." to "recording mode."
[29:2 33:4] Changed	"component such" to "component, such"



[29:2 33:4] Changed	"42, as described" to "42, which was described"
[29:3 34:1] Changed	"operation " to "operating "
[29:3 34:1] Changed	"as described " to "as was described ... to FIG. 3"
[29:4 34:2] Changed	"100B according" to "100B, according"
[29:4 34:2] Changed	"invention is explained" to "invention, ... explained"
[29:4 34:2] Changed	"to Fig." to "to FIG."
[29:4 34:2] Changed	"of Fig. " to "of FIG. "
[29:4 34:2] Changed	"10 to separate it away" to "10 away"
[29:4 34:2] Changed	"100 are" to "100, shown in FIG. 2, are"
[29:4 34:2] Changed	"references and " to "reference ... explained again, "
[29:4 34:2] Changed	"discussions focus to " to "discussion ... focused on "
[29:5 34:3] Changed	"in Fig." to "in FIG."
[29:5 34:3] Changed	"stations 5a – 5d from" to "stations 5a-5d from"
[29:5 34:3] Changed	"another to locate" to "another so ... be located"
[29:5 34:3] Changed	"a development" to "a particular development"
[29:5 34:3] Changed	"stations 5a – 5d contain" to "stations 5a-5d contain"
[29:5 34:3] Changed	"moved to locate" to "moved so as to be located"
[29:5 34:3] Changed	"forming in the page " to "forming operation ... page number"
[29:5 34:3] Changed	"of Fig. " to "of FIG. "
[30:1 34:4] Changed	"is separated away" to "is moved away and separated "
[30:1 34:4] Changed	"and overlay the" to "and overlays all three of the"
[30:2 35:1] Changed	"moved to contact " to "moved into contact with"

<b>[31:1 35:2] Changed</b>	"double-side recording," to "double-sided recording"
<b>[31:1 35:2] Changed</b>	"recording," to "recording mode,"
<b>[31:1 35:2] Changed</b>	"intermediate ... drum 1 when" to "intermediate ... drum 1 when"
<b>[31:1 35:2] Changed</b>	"away from" to "away and separated from"
<b>[31:1 35:2] Changed</b>	"to start running " to "in "
<b>[31:1 35:2] Changed</b>	"such that" to "such a manner that"
<b>[31:1 35:2] Changed</b>	"intermediate ... drum 1 and" to "intermediate ... drum 1 and"
<b>[31:1 35:2] Changed</b>	"transported in a" to "transported, while in "
<b>[31:1 35:2] Changed</b>	"10 to" to "10, to"
<b>[31:1 35:2] Changed</b>	"single-side ... recording" to "single-sided ... recording"
<b>[31:1 35:2] Changed</b>	"after " to "occurring ... transferred to "
<b>[31:1 35:2] Changed</b>	"unit are" to "unit 30 are"
<b>[31:1 35:2] Changed</b>	"100." to "100 as shown in FIG. 2."
<b>[31:2 36:1] Changed</b>	"100," to "100 of FIG. 2,"
<b>[31:2 36:1] Changed</b>	"single-side and" to "single-sided and"
<b>[31:2 36:1] Changed</b>	"side recordings " to "sided recording modes "
<b>[31:2 36:1] Changed</b>	"by the paper" to "by, for instance, a paper"
<b>[32:2 37:2] Changed</b>	"apparatus according" to "apparatus, according"
<b>[32:2 37:2] Changed</b>	"invention is" to "invention, is"
<b>[32:2 37:2] Changed</b>	"Figs" to "FIGS"

<b>[32:2 37:2] Changed</b>	"forming apparatus ... 5 includes" to "forming apparatus ... 5 includes"
<b>[32:2 37:2] Changed</b>	"100 of Fig. 2" to "100 of FIG. 2"
<b>[32:2 37:2] Changed</b>	"an ADF (automatic" to "an automatic"
<b>[32:2 37:2] Changed</b>	") " to "or ADF "
<b>[32:2 37:2] Changed</b>	"shown in Fig. 5. The ADF" to "shown in FIG. ... feeder or ADF"
<b>[32:2 37:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[32:2 37:2] Changed</b>	"forming apparatus of Fig. 5 can" to "forming apparatus of FIG. 5 can"
<b>[32:2 37:2] Changed</b>	"including copying" to "including, copying"
<b>[32:2 37:3] Changed</b>	"on. Fig." to "FIG."
<b>[32:2 37:3] Changed</b>	"apparatus of Fig. 5." to "apparatus of FIG. 5."
<b>[32:2 37:3] Changed</b>	"shown in Fig. 6," to "shown in FIG. 6,"
<b>[32:3 37:4] Changed</b>	"performing ... scanning in which" to "performing ... scanning, in which"
<b>[32:3 37:4] Changed</b>	"read while ... moved and" to "read, while ... moved; and"
<b>[32:3 37:4] Changed</b>	"book scanning in which" to "book scanning, in which"
<b>[32:3 37:4] Changed</b>	"62 is greater " to "62 has a greater surface area"
<b>[32:3 37:4] Changed</b>	"than the" to "than that of the"
<b>[32:3 37:4] Changed</b>	"63 and is used" to "63 and the ... 62 is used"
<b>[32:3 37:4] Changed</b>	"and is read in the" to "and read during a"
<b>[32:3 37:4] Changed</b>	"read as" to "read, as"

[32:3 37:4] Changed	"SDF " to "automatic ... feeder or ADF "
[33:1 38:1] Changed	"65 including a" to "65, which includes a"
[33:1 38:1] Changed	"mirrors and" to "mirrors, and"
[33:1 38:1] Changed	"66 including mirrors " to "66, which includes mirrors,"
[33:1 38:1] Changed	"slide in parallel" to "slide parallel"
[33:1 38:1] Changed	"at a half-speed" to "at one half"
[33:1 38:1] Changed	"-" to "of the "
[33:1 38:1] Changed	"Fig" to "FIG"
[33:2 38:2] Changed	"a CCD (charge-coupled" to "a charge-coupled"
[33:2 38:2] Changed	") 68 " to "or CCD 68, "
[33:2 38:2] Changed	"apparatus such" to "apparatus, such"
[33:3 38:3] Changed	"The ADF 250 includes" to "The automatic ... 250 includes"
[33:3 38:3] Changed	"71 on" to "71, on"
[33:3 38:3] Changed	"read are" to "read, are"
[33:3 38:3] Changed	"Fig" to "FIG"
[33:3 38:3] Changed	"73 of the ADF 250 is" to "73 of the ... ADF 250 is"
[33:3 38:3] Changed	"feed " to "feeding "
[33:3 38:3] Changed	"top " to "surface "
[33:3 38:3] Changed	"space between" to "space, between"
[33:3 38:3] Changed	"tray 82 is used" to "tray 82, is used"
[33:3 38:3] Changed	"holds under ... original placed" to "holds an original, placed"

<b>[35:2 40:3] Changed</b>	"sensor 78 ... 250 and the" <b>to</b> "sensor 78 ... 250 and the"
<b>[35:2 40:3] Changed</b>	"read while" <b>to</b> "read, while"
<b>[35:2 40:3] Changed</b>	"by the ADF 250" <b>to</b> "by the automatic ... or ADF 250"
<b>[35:2 40:3] Changed</b>	"sensor 78 ... 250 and a" <b>to</b> "sensor 78 ... 250 and a"
<b>[35:3 41:1] Changed</b>	"original of ... sheet is read," <b>to</b> "original to ... transparent sheet,"
<b>[35:3 41:1] Changed</b>	"is adhered with " <b>to</b> "has "
<b>[35:3 41:1] Changed</b>	"69 on" <b>to</b> "69 adhered on"
<b>[35:3 41:1] Changed</b>	"colored in " <b>to</b> "made so as to be "
<b>[35:3 41:1] Changed</b>	"white." <b>to</b> "white in color."
<b>[36:1 41:2] Changed</b>	"Fig." <b>to</b> "FIG."
<b>[36:1 41:2] Changed</b>	"a sectional-view" <b>to</b> "a cross-sectional"
<b>[36:1 41:2] Changed</b>	"sectional-view" <b>to</b> "cross-sectional view"
<b>[36:1 41:2] Changed</b>	"in Fig. " <b>to</b> "in FIG. "
<b>[36:1 41:2] Changed</b>	"an LED(light-" <b>to</b> "a light "
<b>[36:1 41:2] Changed</b>	") " <b>to</b> "or LED) "
<b>[36:1 41:2] Changed</b>	"closely-" <b>to</b> "close-"
<b>[36:1 41:2] Changed</b>	"that " <b>to</b> ", which "
<b>[36:1 41:2] Changed</b>	"lens may is" <b>to</b> "lens, may be"
<b>[36:2 41:3] Changed</b>	"accordingly the" <b>to</b> "accordingly, the"
<b>[36:2 41:3] Changed</b>	"leads a" <b>to</b> "leads to a"
<b>[36:2 41:3] Changed</b>	"the ADF" <b>to</b> "the automatic ... feeder or ADF"
<b>[36:2 41:3] Changed</b>	"such an event in that " <b>to</b> "when "

<b>[36:3 41:4] Changed</b>	"including " to ", which includes both "
<b>[36:3 41:4] Changed</b>	"forming occurs" to "forming, occurs"
<b>[36:3 41:4] Changed</b>	"of Fig." to "of FIG."
<b>[36:3 41:4] Changed</b>	"50 of Fig. 6." to "50 of FIG. 6."
<b>[36:4 42:1] Chgd All</b>	"Fig" to "FIG"
<b>[36:4 42:1] Changed</b>	"to the embodiment" to "to an embodiment"
<b>[36:4 42:1] Changed</b>	"have the ADF 250." to "have the automatic ... or ADF 250."
<b>[36:4 42:1] Changed</b>	"the removal ... the pressure" to "the removal ... the pressure"
<b>[36:4 42:1] Changed</b>	"the removal ... the image" to "the removal ... the image"
<b>[36:4 42:1] Changed</b>	"of Fig. 8 " to "of FIG. 8 is"
<b>[36:4 42:1] Changed</b>	"remain " to "the "
<b>[37:1 42:2] Changed</b>	"of Figs." to "of FIGS."
<b>[37:1 42:2] Changed</b>	"8, the page ... recording" to "8, the page ... recording"
<b>[37:1 42:2] Changed</b>	"those " to "the recording sheets P "
<b>[37:1 42:2] Changed</b>	"the image ... and 8 are" to "the image ... and 8 are"
<b>[37:2 43:1] Chgd All</b>	"Fig" to "FIG"
<b>[37:2 43:1] Changed</b>	"Figs" to "FIGS"
<b>[37:2 43:1] Changed</b>	"is of single-sided," to "is single-sided,"
<b>[37:2 43:1] Changed</b>	"number in bracket" to "number, in brackets,"
<b>[37:2 43:1] Changed</b>	"single-side recording," to "single-sided recording"

[37:2 43:1] Changed	"single-side ... abbreviated" to "single-sided ... abbreviated"
[37:2 43:1] Changed	"double-side recording," to "double-sided recording"
[37:2 43:1] Changed	"double-side ... abbreviated" to "double-sided ... abbreviated"
[37:2 43:1] Changed	"D-S is" to "D-S, is"
[38:1 43:2] Changed	"Fig" to "FIG"
[38:1 43:2] Changed	"straight manner" to "straight or forward manner"
[38:1 43:2] Changed	"straight ejection." to "straight or ... ejection."
[38:1 43:2] Changed	"P in order of pages" to "P in increasing ... page numbers"
[38:2 44:1] Changed	"This " to "The "
[38:2 44:1] Changed	"Fig" to "FIG"
[38:2 44:1] Changed	"of the double-side" to "of double-sided"
[38:2 44:1] Changed	"side " to "sided "
[38:2 44:1] Changed	"process and the photoconductive" to "process and ... photoconductive"
[38:3 44:2] Chgd All	"Fig" to "FIG"
[38:3 44:2] Changed	"Figs" to "FIGS"
[38:3 44:2] Changed	"page and so" to "page as so"
[38:4 44:3] Changed	"ejecting " to "where "
[38:4 44:3] Changed	"recording ... the stacker" to "recording ... the stacker"
[38:4 44:3] Changed	"cases ejection ... the ejection" to "cases where ... the ejection"

<b>[39:1 44:4] Changed</b>	"Combination of " to "In combining "
<b>[39:1 44:4] Changed</b>	"above reading ... manner makes" to "above-described ... come up with"
<b>[39:1 44:4] Changed</b>	"single-sided ... sheet scanning" to "single-sided ... sheet scanning"
<b>[39:1 44:4] Changed</b>	"read by the CCD 68 under" to "read by the ... CCD 68 under"
<b>[39:1 44:4] Changed</b>	"of the ADF 250." to "of the automatic ... or ADF 250."
<b>[39:1 44:4] Changed</b>	"double-sided ... sheet scanning" to "double-sided ... sheet scanning"
<b>[39:1 44:4] Changed</b>	"even page" to "even-numbered page"
<b>[39:1 44:4] Changed</b>	"odd page" to "odd-numbered page"
<b>[39:1 44:4] Changed</b>	"read by the CCD 68 with" to "read by the ... CCD 68 with"
<b>[39:1 44:4] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[39:1 44:4] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[39:1 44:4] Changed</b>	"read by the CCD 68 moved" to "read by the ... CCD 68 moved"
<b>[39:3 45:2] Changed</b>	"side " to "sided "
<b>[39:3 45:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[39:3 45:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[39:3 45:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[39:3 45:2] Changed</b>	"read in order ... 1, 2, 3, 4," to "read in order ... 1, 2, 3, 4,"



<b>[39:3 45:2] Changed</b>	"1 in order ... 1, 2, 3, 4," to "1 in order ... 1, 2, 3, 4,"
<b>[39:3 45:2] Changed</b>	"page order." to "page number order."
<b>[40:1 45:4] Changed</b>	"of pages and" to "of page numbers and"
<b>[40:2 46:1] Changed</b>	"pages" to "page numbers"
<b>[40:3 46:2] Changed</b>	"side " to "sided "
<b>[40:3 46:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[40:3 46:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[40:3 46:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[40:3 46:2] Changed</b>	"even and odd pages," to "even-numbered and odd-numbered pages,"
<b>[40:3 46:2] Changed</b>	"78 that" to "78, that"
<b>[40:3 46:2] Changed</b>	"even page locates upstream" to "even-numbered ... located upstream"
<b>[40:3 46:2] Changed</b>	"63 that" to "63, that"
<b>[40:3 46:2] Changed</b>	"odd page locates downstream." to "odd-numbered ... downstream."
<b>[40:3 46:2] Changed</b>	"pages " to "page numbers "
<b>[40:3 46:2] Changed</b>	"therefore no" to "therefore, no"
<b>[41:2 46:4] Changed</b>	"side " to "sided "
<b>[41:2 46:4] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[41:2 46:4] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[41:2 46:4] Changed</b>	"an increasing ... such as 1, 2," to "an increasing ... such as 1, 2,"

11:2 46:4] Changed "in increasing ... such as 1, 2," to "in increasing ... such as 1, 2,"

11:2 46:4] Changed "1 in order of pages" to "1 in increasing ... page numbers"

11:4 47:2] Changed "side " to "sided "

11:4 47:2] Changed "sheet by" to "sheet-by-sheet"

11:4 47:2] Changed "by sheet" to "sheet-by-sheet"

11:4 47:2] Changed "page such" to "page numbers, such"

11:4 47:2] Changed "placements " to "placement "

11:4 47:2] Changed "of pages such" to "of page numbers, such"

11:4 47:2] Changed "of pages 1," to "of page numbers 1,"

11:4 47:2] Changed "it read" to "it be read"

11:4 47:2] Changed "therefore no" to "therefore, no"

12:2 48:2] Changed "the double-side recording mode," to "the double-sided recording mode,"

12:2 48:2] Changed "the ADF" to "the automatic ... feeder or ADF"

12:2 48:2] Changed "sheet by" to "sheet-by-sheet"

12:2 48:2] Changed "by sheet" to "sheet-by-sheet"

12:2 48:2] Changed "pages " to "page numbers "

12:2 48:2] Changed "even and odd pages," to "even-numbered and odd-numbered pages,"

12:2 48:2] Changed "The double-side recording process" to "The double-sided recording process"

<b>[43:4 49:3] Changed</b>	"1 in order of even " to "1 in a pattern of even-numbered"
<b>[43:4 49:3] Changed</b>	"odd pages," to "odd-numbered pages,"
<b>[43:4 49:3] Changed</b>	"in the double-side ... mode (i.e.," to "in the double-sided ... mode (i.e.,"
<b>[43:4 49:3] Changed</b>	"the double-side recording mode." to "the double-sided recording mode."
<b>[44:2 50:2] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"
<b>[44:2 50:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[44:2 50:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[44:2 50:2] Changed</b>	"placements " to "placement "
<b>[44:2 50:2] Changed</b>	"of pages such" to "of page numbers, such"
<b>[44:2 50:2] Changed</b>	"it read." to "it be read."
<b>[44:2 50:2] Changed</b>	"recording through the" to "recording via the"
<b>[44:2 50:2] Changed</b>	"1 in order of even " to "1 in a pattern of even-numbered"
<b>[44:2 50:2] Changed</b>	"odd pages" to "odd-numbered pages,"
<b>[44:2 50:2] Changed</b>	"odd pages such as" to "odd-numbered pages, such as"
<b>[44:2 50:2] Changed</b>	"the double-side ... mode through" to "the double-sided recording mode via"
<b>[44:2 50:2] Changed</b>	"generated through the" to "generated via the"
<b>[44:2 50:2] Changed</b>	"recording sheet P" to "recording sheets P"
<b>[45:2 51:2] Changed</b>	"side " to "sided "
<b>[45:2 51:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"

<b>[47:2 53:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[47:2 53:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[47:2 53:2] Changed</b>	"page such" to "page numbers, such"
<b>[47:2 53:2] Changed</b>	"placements " to "placement "
<b>[47:2 53:2] Changed</b>	"of pages such" to "of page numbers, such"
<b>[47:2 53:2] Changed</b>	"1 in order of pages" to "1 in increasing ... page numbers"
<b>[47:2 53:2] Changed</b>	"it read" to "it be read"
<b>[47:2 53:2] Changed</b>	"therefore no" to "therefore, no"
<b>[47:2 53:2] Changed</b>	"through " to "via "
<b>[47:4 54:2] Changed</b>	"double-side recording" to "double-sided recording"
<b>[47:4 54:2] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[47:4 54:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[47:4 54:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[47:4 54:2] Changed</b>	"order of pages ... and so on. " to "increasing ... and so on. "
<b>[47:4 54:2] Changed</b>	"single-side recording " to "single-sided ... operation"
<b>[47:4 54:2] Changed</b>	"odd page" to "odd-numbered page"
<b>[47:4 54:2] Changed</b>	"even page" to "even-numbered page"
<b>[48:2 54:4] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"
<b>[48:2 54:4] Changed</b>	"the ADF" to "the automatic ... feeder or ADF"
<b>[48:2 54:4] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[48:2 54:4] Changed</b>	"by sheet" to "sheet-by-sheet"

<b>[48:2 54:4] Changed</b>	"read in order of even " to "read in a ... even-numbered"
<b>[48:2 54:4] Changed</b>	"odd pages" to "odd-numbered pages,"
<b>[48:2 54:4] Changed</b>	"odd pages such as" to "odd-numbered pages, such as"
<b>[48:2 54:4] Changed</b>	"1 in order of pages" to "1 in increasing ... page numbers,"
<b>[48:2 54:4] Changed</b>	"on in the ... recording mode" to "on, in the ... recording mode"
<b>[48:2 54:4] Changed</b>	"through " to "via "
<b>[49:2 55:2] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"
<b>[49:2 55:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[49:2 55:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[49:2 55:2] Chgd All</b>	"pages" to "page numbers"
<b>[49:2 55:2] Changed</b>	"placements " to "placement "
<b>[49:2 55:2] Changed</b>	"of pages such" to "of page numbers, such"
<b>[49:2 55:2] Changed</b>	"1 in order of pages as" to "1 in increasing ... page numbers"
<b>[49:2 55:2] Changed</b>	"read such" to "read, such"
<b>[49:2 55:2] Changed</b>	"on in the ... recording mode" to "on, in the ... recording mode"
<b>[49:2 55:2] Changed</b>	"the double-side recording mode." to "the double-sided recording mode."
<b>[49:4 56:2] Changed</b>	"the double-side recording mode," to "the double-sided recording mode,"

<b>[49:4 56:2] Changed</b>	"sheet by" to "sheet-by-sheet"
<b>[49:4 56:2] Changed</b>	"by sheet" to "sheet-by-sheet"
<b>[49:4 56:2] Changed</b>	"of pages from" to "of page numbers from"
<b>[49:4 56:2] Changed</b>	"placements " to "placement "
<b>[49:4 56:2] Changed</b>	"of pages such" to "of page numbers, such"
<b>[49:4 56:2] Changed</b>	"it read." to "it be read."
<b>[49:4 56:2] Changed</b>	"recording through the" to "recording via the"
<b>[49:4 56:2] Changed</b>	"1 in order of pages" to "1 in increasing ... page numbers"
<b>[49:4 56:2] Changed</b>	"in the double-side ... mode (i.e.," to "in the double-sided ... mode (i.e.,"
<b>[49:4 56:2] Changed</b>	"single-side recording" to "single-sided recording"
<b>[49:4 56:2] Changed</b>	"recording sheet P" to "recording sheetd P"
<b>[50:2 57:2] Changed</b>	"of Fig." to "of FIG."
<b>[50:2 57:2] Changed</b>	"table of Fig. 9" to "table of FIG. 9"
<b>[51:1 57:4] Changed</b>	"double-side ... recording" to "double-sided ... recording"
<b>[51:2 57:5] Changed</b>	"Fig" to "FIG"
<b>[51:2 57:5] Changed</b>	"a " to "an amount of "
<b>[51:3 57:6] Changed</b>	"Fig" to "FIG"
<b>[51:3 57:6] Changed</b>	"are needed " to "need "
<b>[51:3 57:6] Changed</b>	"small " to "smaller than "
<b>[51:3 57:6] Changed</b>	"case of an ... that reads" to "case where an apparatus reads"
<b>[51:4 58:1] Changed</b>	"Fig" to "FIG"

<b>[51:4 58:1] Changed</b>	"a control of " to "controlling the "
<b>[51:4 58:1] Changed</b>	"optical " to "optimal "
<b>[51:4 58:1] Changed</b>	"with the mode" to "with whatever mode"
<b>[51:4 58:1] Changed</b>	"such as the ... recording and " to "is chosen, ... whatever "
<b>[51:4 58:1] Changed</b>	"such as a " to ", i.e., "
<b>[51:4 58:1] Changed</b>	"thick or" to "thick recording sheet or"
<b>[51:4 58:1] Changed</b>	"the double-side recording requires" to "the double-sided ... mode requires"
<b>[51:4 58:1] Changed</b>	"single-side recording." to "single-sided recording"
<b>[51:4 58:1] Changed</b>	"recording." to "recording mode."
<b>[51:4 58:1] Changed</b>	"the single-side recording mode," to "the single-sided recording mode,"
<b>[51:4 58:1] Changed</b>	"roller at" to "roller, at"
<b>[51:4 58:1] Changed</b>	"image may" to "image, may"
<b>[52:1 58:2] Changed</b>	"Fig" to "FIG"
<b>[52:1 58:2] Changed</b>	"of temperature to" to "of heat to"
<b>[52:1 58:2] Changed</b>	"for transferring " to "while "
<b>[52:1 58:2] Changed</b>	"toner image from" to "toner images are transferred from"
<b>[52:2 58:3] Changed</b>	"Fig" to "FIG"
<b>[52:2 58:3] Changed</b>	"happens" to "from happening"
<b>[52:3 59:1] Chgd All</b>	"Fig" to "FIG"

<b>[52:3 59:1] Changed</b>	"forming system includes the" <b>to</b> "forming system ... includes the"
<b>[52:3 59:1] Changed</b>	"of Fig. 5 added with" <b>to</b> "of FIG. 5 and"
<b>[52:3 59:1] Changed</b>	"a side of ... 250 and over" <b>to</b> "a side of ... 250 and over"
<b>[52:3 59:1] Changed</b>	"another side ... 250 and over" <b>to</b> "another side ... 250 and over"
<b>[52:3 59:1] Changed</b>	"bins each for receiving" <b>to</b> "bins which each receive"
<b>[52:3 59:1] Changed</b>	"in page " <b>to</b> "in increasing page number"
<b>[53:1 59:2] Changed</b>	"provided to an" <b>to</b> "provided on an"
<b>[53:1 59:2] Changed</b>	"ways to guide " <b>to</b> "paths for guiding "
<b>[53:1 59:2] Changed</b>	"P to the stacker" <b>to</b> "P to either the stacker"
<b>[53:2 59:3] Changed</b>	"P ejected" <b>to</b> "P, ejected"
<b>[53:2 59:3] Changed</b>	"32 to" <b>to</b> "32, to"
<b>[53:2 59:3] Changed</b>	"ways to guide " <b>to</b> "paths for guiding "
<b>[53:2 59:3] Changed</b>	"P to the ejection" <b>to</b> "P to either the ejection"
<b>[53:3 60:1] Changed</b>	"handling shown" <b>to</b> "handling, shown"
<b>[53:3 60:1] Changed</b>	"Fig. " <b>to</b> "FIG. "
<b>[53:3 60:1] Changed</b>	"9 can" <b>to</b> "9, can"
<b>[53:4 60:2] Changed</b>	"handling shown" <b>to</b> "handling, shown"
<b>[53:4 60:2] Changed</b>	"Fig. " <b>to</b> "FIG. "
<b>[53:4 60:2] Changed</b>	"9 can" <b>to</b> "9, can"
<b>[53:5 60:3] Changed</b>	"As an alternative system" <b>to</b> "Alternatively"
<b>[53:5 60:3] Changed</b>	"system of the" <b>to</b> "system having the"



<b>[54:4 61:3] Changed</b>	<b>"The ADF" to "The automatic ... feeder or ADF"</b>
<b>[54:4 61:3] Changed</b>	<b>"72 and" to "72, and"</b>
<b>[54:4 61:3] Changed</b>	<b>"having " to ", which includes all of "</b>
<b>[54:4 61:3] Changed</b>	<b>"Fig. 5." to "the automatic ... of FIG. 5."</b>
<b>[54:5 61:4] Changed</b>	<b>"The ADF 250 " to "The automatic ... ADF 250B "</b>
<b>[54:5 61:4] Changed</b>	<b>"of the ADF 250B" to "of the automatic ... or ADF 250B"</b>
<b>[54:5 61:4] Changed</b>	<b>"is extended " to "extends, "</b>
<b>[54:5 61:4] Changed</b>	<b>"pressure between" to "pressure, between"</b>
<b>[54:5 61:4] Changed</b>	<b>"exchanged to each" to "exchanged with each"</b>
<b>[54:5 61:4] Changed</b>	<b>"pressing roller 93" to "pressing rollers 93"</b>
<b>[54:5 61:4] Changed</b>	<b>"62b when the ADF" to "62b, when ... feeder or ADF"</b>
<b>[54:5 61:4] Changed</b>	<b>"state to" to "state, to"</b>
<b>[55:1 62:1] Changed</b>	<b>"The ADF" to "The A\automatic ... feeder or ADF"</b>
<b>[55:1 62:1] Changed</b>	<b>"actuator such" to "actuator (not shown), such"</b>
<b>[55:1 62:1] Changed</b>	<b>"solenoid (not shown)," to "solenoid,"</b>
<b>[55:2 62:2] Changed</b>	<b>"the ADF" to "the automatic ... feeder or ADF"</b>
<b>[55:2 62:2] Changed</b>	<b>"structured in " to "having "</b>
<b>[55:2 62:2] Changed</b>	<b>"the way as described above" to "the above-described structure"</b>
<b>[55:2 62:2] Changed</b>	<b>"200 in the way " to "200B in a ... scanner 200 "</b>
<b>[55:2 62:2] Changed</b>	<b>"Fig" to "FIG"</b>
<b>[55:2 62:2] Changed</b>	<b>"side is read." to "side can be read."</b>
<b>[55:3 62:3] Changed</b>	<b>"the ADF" to "the automatic ... feeder or ADF"</b>

[55:4 62:4] Changed	"thereof is pressed" to "thereof pressed"
[55:4 62:4] Changed	"Fig" to "FIG"
[55:4 62:4] Changed	"consequently the" to "consequently, the"
[55:4 62:4] Changed	"the originals " to "the sheet-formed originals S"
[55:4 62:4] Changed	"sheet by" to "sheet-by-sheet."
[55:4 62:4] Changed	"by sheet. The original " to "sheet-by-sheet. ... original S"
[55:4 62:4] Changed	"remove paper" to "remove a paper"
[56:1 63:1] Changed	"C1, the original is" to "C1, the sheet-formed original S is"
[56:1 63:1] Changed	"locate the original at" to "locate the ... original S at"
[56:1 63:1] Changed	"of the original is" to "of the sheet-formed original S is"
[56:1 63:1] Changed	"64 (Fig." to "64 (as discussed ... respect to FIG."
[56:1 63:1] Changed	"66 (Fig. " to "66 (as discussed ... respect to FIG. "
[56:1 63:1] Changed	"C " to "C2 "
[56:1 63:1] Changed	"transfer the original to" to "transfer the ... original S to"
[56:2 63:2] Changed	"The original " to "The sheet-formed original S"
[56:2 63:2] Changed	"96 which is" to "96, which was"
[56:2 63:2] Changed	"an upward ... original " to "the upwardly-directed ... original S "
[56:2 63:2] Changed	"transfer the original to" to "transfer the ... original S to"
[56:2 63:2] Changed	"of the original is" to "of the sheet-formed original S is"
[56:2 63:2] Changed	"indicated ... direction " to ", indicated ... of arrow "
[56:2 63:2] Changed	"Thereby, the original is" to "Thereby, the ... original S is"
[56:2 63:2] Changed	"of originals " to "of the sheet-formed originals S"

<b>[56:2 63:2] Changed</b>	"pages " to "page numbers "
<b>[57:1 64:1] Changed</b>	"in " to "to have "
<b>[57:1 64:1] Changed</b>	"the original " to "the sheet-formed original S"
<b>[57:2 64:2] Changed</b>	"of Fig." to "of FIG."
<b>[57:2 64:2] Changed</b>	"the figure of Fig. 11; " to "FIG. 11 by "
<b>[57:2 64:2] Changed</b>	"of originals" to "of sheet-formed originals"
<b>[57:2 64:2] Changed</b>	"read originals" to "read sheet-formed originals"
<b>[57:3 64:3] Changed</b>	"Fig. 11 structured ... rules of the " to "FIG. 11, having ... rules of "
<b>[57:3 64:3] Changed</b>	"table of Fig. 9." to "table of FIG. 9."
<b>[57:3 64:3] Changed</b>	"the originals " to "the sheet-formed originals S"
<b>[57:4 64:4] Changed</b>	"double-side ... recording" to "double-sided ... recording"
<b>[57:5 65:1] Changed</b>	"Fig" to "FIG"
<b>[57:6 65:2] Changed</b>	"Fig" to "FIG"
<b>[57:6 65:2] Changed</b>	"are needed to " to "must "
<b>[57:6 65:2] Changed</b>	"far small " to "a far smaller ... be stored "
<b>[58:1 65:3] Changed</b>	"apparatus ... embodiment" to "apparatus, ... embodiment"
<b>[58:1 65:3] Changed</b>	"invention is" to "invention, is"
<b>[58:1 65:3] Changed</b>	"to Fig." to "to FIG."
<b>[58:1 65:3] Changed</b>	"image forming ... 12 includes" to "image forming ... 12, includes"
<b>[58:1 65:3] Changed</b>	"100B of Fig. 4, the" to "100B, of FIG. 4, and both the"
<b>[58:1 65:3] Changed</b>	"200 of Fig. ... 250 of Fig" to "200 and the ... 250, of FIG"

<b>[59:2 67:1] Changed</b>	"of the sheet" to "of sheet"
<b>[59:2 67:1] Changed</b>	"table of Fig. 9." to "table of FIG. 9."
<b>[59:3 67:2] Changed</b>	"double-side ... recording" to "double-sided ... recording"
<b>[59:4 67:3] Changed</b>	"Fig" to "FIG"
<b>[60:1 67:4] Changed</b>	"Fig" to "FIG"
<b>[60:1 67:4] Changed</b>	"are needed " to "need "
<b>[60:1 67:4] Changed</b>	"far small " to "a far smaller ... stored than "
<b>[60:2 67:5] Changed</b>	"of Fig." to "of FIG."
<b>[60:2 67:5] Changed</b>	"100B of Fig. 5," to "100B of FIG. 5,"
<b>[60:2 67:5] Changed</b>	"reverse" to "reversely"
<b>[60:2 67:5] Changed</b>	"10 is configured" to "10 are configured"
<b>[60:2 67:5] Changed</b>	"with " to "each other "
<b>[60:4 68:2] Changed</b>	"present application are" to "present invention are"
<b>[60:5 69:1] Del Paras</b>	"This application ... ABSTRACT"
<b>[84:2 69:1] Add Paras</b>	"What is claimed ... OF THE DISCLOSUR"
<b>[84:2 70:2] Changed</b>	"first ejection ... sheets in" to "first ejection ... sheets in"
<b>[84:2 70:2] Changed</b>	"straight orientation" to "straight or ... orientation,"
<b>[84:2 70:2] Changed</b>	"orientation and" to "orientation, and"
<b>[84:2 70:2] Changed</b>	"second ejection ... sheets in" to "second ejection ... sheets in"
<b>[84:2 70:2] Changed</b>	"surface " to "first and ... surfaces "
<b>[84:2 70:2] Changed</b>	"side " to "sided "
<b>[84:2 70:2] Changed</b>	"pages" to "page numbers"

**[85:1 70:3] Changed** "I:\atty\gas\211790US\211790 orig spec.wpd" to  
"I:\atty\gas\211790\Sub Spec.wpd"